

The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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From the "LONDON MINING JOURNAL."

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Ordnance Department—
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"Your Machine does its work most satisfactorily, and has never once reversed current, which the Weston Machine frequently did."

From the ELECTROLYTIC COMPANY.

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From the NICKEL AND SILVER PLATING WORKS.

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From the LONDON NICKEL PLATING COMPANY.

"We have much pleasure in expressing our entire satisfaction with the nickel-plating solution, anodes, and Dynamo Machine that you have supplied us with."

From the DYNAMO-ELECTRIC PLATING WORKS.

2, OLD SWAN LANE, LONDON.

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AND MANY OTHERS.

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Meetings of Public Companies.

EBERHARDT MINING COMPANY.

The third annual general meeting of shareholders was held at the Cannon-street Hotel, on Monday, —Mr. E. L. J. RIDSDALE (Chairman) presiding.

Mr. R. WRIGHT (the secretary) read the notice convening the meeting. The reports and accounts were taken as read.

The CHAIRMAN said the report and balance-sheet gave a tolerably good summary of the work done during the year. The shareholders would remember that when they met last year search was being made for ore. In September last they came upon small quantities, yielding from \$12 to \$25, but it was not until November last they succeeded in striking the rich ore in depth. The object for which they had driven the tunnel, at great expense, was to find whether the silver (of which they had taken away such large quantities in the upper workings, amounting to 600,000, or 700,000, sterling) existed in depth, and whether in cutting it in depth they could mine it out at a less expense than they had been able to do. It was in November last that they came upon this rich ore in depth, and shortly afterwards the directors sent round to the shareholders a report from Capt. Drake, stating that he was following up many seams under the Old Ward Beecher workings, and that the ore ran from \$500 to \$700 per ton. They might be said to have solved the question of the ore in depth as far as the quality was concerned, and the only thing they now wanted was to find it in quantity. They would remember that when they were at work at the upper workings in other parts of the mine the seams of ore used to run out into large chambers of this chloride of silver, and it was from these large chambers they took the large quantities of silver which they had extracted from the mine. Capt. Drake was then pushing on his explorations with the greatest energy along these seams, in the hope of opening up into these chambers of ore. Up to the present they were only on these seams. They were working on seams 18 in. in width. There were a good many of these seams in different directions, and Capt. Drake was pushing forward to get out as much ore as he could in order to start the mill with as little loss of time as possible. In November last Capt. Drake took all the rock-drills out of the mine, because the directors found that they were running rather short of funds, and they did not wish to press the calls upon the shareholders with greater rapidity than they could possibly avoid. That was the reason they were obliged to take the rock-drills up; because the directors thought that as they had now actually got the ore, the operations might now be carried on by hand-labour, and they would thus avoid pressing the shareholders for calls, and they might thus get enough out to start the mill, and the directors still thought there was every probability of doing so, as Capt. Drake would now push on and open up the mine more quickly. But the directors, as custodians of the interests of the shareholders, did not want to increase their liabilities. Of course, if those who had unpaid calls would pay them in full, and render the shares marketable, it would put the directors in possession of funds to enable them to open the mine more rapidly, and they would be able to start the mill at the end of the present year. Of course, the directors could not ask the shareholders to do that, and the directors could hardly press them more than they had done. It was always unpleasant to press for money in that way; but, at the same time, the directors were of opinion that if the shareholders wanted the mine developed quickly, the best thing was to pay up the call, so that the money so obtained might be employed in the rapid development of the mine. This was a matter which the directors could only place before the shareholders for their consideration. There was one item which was very satisfactory in the balance-sheet, and that was that in connection with the White Pine Waterworks, there had been a return of capital from the original vendors of \$2000. Twelve years ago, under the advice of the then manager, the White Pine Waterworks were purchased, for the purpose of affording water for the supply of the mill. At that time the company had not a sufficient supply of water, and it was necessary to get it. The original vendors of the company paid half the purchase-money, and the old Eberhardt paid the other half. The old company was liquidated, and reconstructed this new company, and ever since the directors have been endeavouring to persuade the vendors that the company has been a source of loss, and asking the vendors whether they could not try and do something for the company, and at last they consented to return \$2000. out of the purchase-money which had been paid for the White Pine Waterworks. The vendors had thus behaved very handsomely; indeed, he did not think there was parallel case of the vendors of any property returning money after 12 years. (Hear, hear.) There were a great many delicate negotiations to be gone through in connection with it, and this was the result. The return of that money had helped the company very materially in carrying on the works. Before sitting down, and asking them to adopt the report and accounts, he had to mention that during the past year they had lost the services of three directors. Mr. Applegarth had returned to America upon private affairs; Mr. Baxter had left the board, owing to commercial misfortunes which overtook him; and Mr. Wild had, he was sorry to say, completely broken down. Mr. Wild had personally visited the property, and his services and advice had been very valuable, and the directors missed him very much. The board had only elected one director in the room of those three gentlemen. They must have three directors, but there was no desire to burden the company with more, and, therefore, they had only elected on the board Mr. A. L. Sacré, an engineer of eminence, who had had experience in mining matters, and on that three directors would be as many as were necessary to conduct the business of the company. He hoped that the seams which Capt. Drake was now at work upon would open out well; they were pushed forward as energetically as possible. (Hear, hear.) He had omitted to allude to one remarkable fact, which took place in November, and that was that when the ore was got out it contained \$12 of gold to the ton; and thus it was seen that the ore assimilated very much to the character of the Richmond ore—in fact, if the Richmond ore had not contained gold that company would not have made much money out of either silver or lead. Therefore, it was of very great importance that this has been met with in depth in Eberhardt, and was certainly a hopeful indication of progress and success in future. (Cheers). In conclusion, the Chairman moved the adoption of the report and accounts.

Mr. A. L. SACRE seconded the motion.

A SHAREHOLDER: What amount was originally paid for the White Pine Waterworks? —The CHAIRMAN: \$30,000.; that is 15,000^l by the original vendors of the Eberhardt Company, and 15,000^l by the company itself; but it was not paid exactly in hard cash, but by the emission of shares at a high premium, and, as a matter of fact, the White Pine Waterworks cost the company about 10,000^l. We have since had 2000^l returned, and, therefore, they now stand in our books at 8000^l. I may mention these works originally cost from 100,000^l to 200,000^l; at that time Hamilton City was in a ferment with mining camps, and the machinery for the waterworks was brought over the mountain at a great cost, and we afterwards bought it. As it happened we paid too high a price, but it is an asset which at any time may become very valuable if the mining properties there start again into life. At this moment another American company has started up, the Smoky Mill, and we have been asked to lease the White Pine Waterworks to them; and we have agreed to lease them for one year, as we were running them a loss of 2500^l a year, and the price at which we have leased them will leave us a small profit, and the other company will supply us with all the water we want at \$1 per 1000 gals. It is possible Hamilton City may be again alive with mining camps, and then we shall find our water a source of profit instead of a loss. (Hear, hear.)

Mr. HURST said that from the statement of the Chairman, and also the report of Capt. Drake, he thought the shareholders might look forward in a short time to something satisfactory being done. They had been looking forward to a dividend for a long time, but there had never been much prospect till now of getting one. He noticed that the directors had checked Capt. Drake in his work, because they were not willing to call up the very small amount unpaid. He himself, and no doubt some other shareholders had paid up their calls in full, but for those who had not paid up there was only 4s. per share remaining to be called up. If such were the case he did not see any reason why the directors should not make the call of 4s. per share, and go to work with even greater energy. (Hear, hear, and No, no.) Whilst they were losing time, and also causing some of the shareholders to lose a good deal of their confidence in the company. If Capt. Drake had gone on something might have been achieved which would have been favourable to the shareholders; instead of a 2s. call being made he hoped the directors would call the remaining 4s. per share, and that Capt. Drake be urged to go on with the work with the greatest possible energy so that the shareholders might know as soon as possible what their position was likely to be. He believed it would also improve the position of the shares in the market. He hoped the shareholders had now some prospect of getting some return for their investment in a very short time. It would be remembered that when the company was reconstructed a large number of shares were given to the directors for their services because they had not charged anything for their services. This he understood at the time was a kind of credit, and was to serve as remuneration for the directors until such time as they made a profit, when the shareholders would be willing to pay the directors handsomely; but whilst the company was making no profit there should not be much charged for the remuneration of the directors. Those services were being paid handsomely out of partners' capital. He could understand their being paid handsomely out of profits, but not out of the capital of the shareholders themselves. He again urged that everything should be done to develop the mine as rapidly as possible, and in the meantime they should, especially in London, exercise the greatest economy. One thing which the Chairman had said to-day he entirely agreed with, and that was the reduction in the number of directors, and he supposed this would mean a smaller amount of remuneration paid to the board. He hoped the shareholders would shortly receive something satisfactory; but he hoped the shareholders would agree that it was better to make the 4s. call at once, and instructions be given to Capt. Drake to push on operations with all possible speed. He questioned whether it was worth while going to the expense of sending a map round to the shareholders, many of whom had but a very slight knowledge of mining.

Mr. ROBINSON asked what was the remuneration which the directors received? —The CHAIRMAN replied to the observations and questions. As regarded the calling up 4s. per share, personally, he should be very pleased to see the money called up so that they could give instructions to Capt. Drake to push on and open up the mine with the utmost possible speed; but there were many gentlemen to whom this call of 2s. per share meant a payment of 2000^l, or 3000^l. This, of course, was a great consideration with the directors, and was borne in mind when gentlemen wrote to say the call was heavy, and the directors were bound, as a matter of courtesy, to make the call as little offensive and as little pressing as they could. (Hear, hear.) He saw one or two gentlemen present who were large shareholders, and who could bear out his statements that the directors, in making a call, had been as lenient as possible. (Hear, hear.) When the reconstruction of the company took place it was an understood thing that the calls should be made in as small amounts as possible, in order to press as leniently as possible upon the shareholders who did not pay up. The directors could only put the state of things before the shareholders, and ask them to pay up. If Mr. Hurst had been at the board he would know what difficulty there was in getting in the calls, and the directors had always been averse to taking the extreme course of forfeiting the shares if it could be avoided, and the directors had

done their utmost to meet the convenience of the shareholders with regard to the payment of calls. Some shareholders, in consequence of many losses in mining properties, had not the money to pay the calls. It was very important at one time that Capt. Drake should use the rock-drills in order to get at the seams, but now that the ore was in sight the use of rock-drills was not so important; at the same time he agreed with Mr. Hurst that if they could get the money paid up it would be of great advantage, but though they might "call spirits from the vasty deep," yet they had to consider whether they would come. They might make a call of 4s. per share, but how far would it come in; but instead of making a 4s. call now they could repeat the 2s. call if deemed desirable. The object of the directors had been to make the calls as little irksome as possible. The last call was made in November. As regards the remuneration of the directors that was a matter which was thoroughly discussed at the last meeting, and he thought the shareholders who were present at the time would recollect that the share which were voted to the directors were voted as some remuneration to the directors for the past five years' services, for which they had, up to that time, received no remuneration. At that time there were five directors. When the company was reconstructed it was thought better the remuneration should be a fixed quantity, and a moderate sum was fixed, and he did not think they would find any gentlemen of any position to take the office of director of a mining company, especially if it was up-hill work, unless they were somewhat remunerated for their trouble. (Hear, hear.) They must pay directors the same as they paid the secretary; work not paid for was generally badly done. He might mention that the fees the year did not come out of the pockets of the shareholders of this property. It was extracted from the vendors of the White Pine Waterworks, and certainly if there was one time more than another when the directors might claim it, it was the present, for it had been like "getting butter out of a dog's mouth." As regards sending round a map I thought a great many shareholders knew more of mining than Mr. Hurst gave them credit for. Many shareholders came to the office, and liked to have as much information as possible, and, therefore, the directors, very much at his own suggestion, had sent out the map, which had really cost but a trifling amount, and there were many shareholders who liked to know what was being done. (Hear, hear.)

Mr. BLADON said that as regarded the calls, he thought the directors had acted with very great discretion. It, by economising the expenditure, the directors could make the calls less mercy in this case was simply justice. (Hear, hear.) The directors should economise the expenditure, provided they did not stop effective working. He thought that those who had not paid up their calls were worthy of some little consideration, but at the same time they must respond with some cheerfulness to the necessary amount of expenditure which must be carried on. He hoped they were not very far distant from the time when they would make a fair discovery; the indications had pointed to that for sometime past. (Hear, hear.)

Mr. ROBINSON: If you reduced the number of directors I presume you reduce the fees? —The CHAIRMAN: Certainly.

The resolution for the adoption of the report and accounts was then put and carried unanimously.

The CHAIRMAN said the next question was the re-election of the retiring director. He himself was the retiring director, and he should be glad to give his services again if the shareholders saw fit to re-elect him. (Hear, hear.) He hoped the next time he had the pleasure of meeting them he should be able to tell them that they had met with good success, and have some money as well. The directors had stuck to their duties as well as any board could do, and Capt. Drake had also discharged his duties faithfully and well. (Hear, hear.) For his own part he had never lost faith in the property. They had, in years gone by, taken an enormous bulk of silver from the mine, and he believed that in the future they would come to another bulk of silver, which would make this mine a marvellous success.

A SHAREHOLDER moved that Mr. Ridsdale be re-elected a director. —The CHAIRMAN said he had pleasure in seconding the motion, as the Chairman had filled the office of director and Chairman so well, and had given a fair explanation, and was very earnest in the affairs of the company.

The resolution was put and carried.

The CHAIRMAN acknowledged the compliment, and said the directors were very pleased to hear any criticisms which were made on the affairs of the company.

The auditor, Mr. Samuel Slater, was then re-elected on the motion of Mr. TAMPSON, seconded by Mr. BLADON.

Mr. BLADON moved a vote of thanks to Capt. Drake, Mr. Wright, the secretary, and the staff. —The CHAIRMAN said he had very great pleasure in seconding the motion.

A SHAREHOLDER: I often go to the office, and I have pleasure in saying that I always receive from Mr. Wright the fullest information I require.

Mr. ROBINSON: I have pleasure in endorsing that. —The motion was carried.

Mr. WRIGHT acknowledged the compliment.

A cordial vote of thanks was then passed to the Chairman and the directors, and the meeting broke up.

RIO GRANDE DO SUL (BRAZIL) GOLD MINING COMPANY.

The ordinary general meeting of shareholders was held at the offices of the company, Finsbury-circus, on Wednesday,

Mr. BURROUGHS L. KERSHAW in the chair.

Mr. J. ARTHUR MORGAN, F.G.S. (the secretary and solicitor) read the notice convening the meeting. The reports and accounts were taken as read.

The CHAIRMAN said the reports received during the half-year had not been so very encouraging, but that morning letters had been received from Capt. Eddy, which were a great deal more satisfactory in character. The Aurora lode, upon which all their energies had been concentrated, as it was thought to be the richest mine on their enormous concession of 9000 square miles, was expected to yield sufficient bullion to pay the expenses and something over; but, unfortunately, owing to the geological condition of the strata, on exploring that lode deeper they unexpectedly came upon syenitic granite, and the yield of gold had been very much reduced. Although there was enough gold to pay if worked on a large scale there was not enough gold to pay while the operations were on a limited scale. It was unfortunate that the Aurora lode had been selected, because there were eight or nine other lodes on the same hill which, although not so rich at surface, might have held out better in depth. Capt. Eddy, in his latest advice, stated that he was going to explore, what he called, Moza's lode, and the new lode he discovered in clearing the site for the reduction-works, and these lodes might turn out to hold down in depth better than the Aurora. Capt. Eddy did not give up the Aurora lode in depth, and very possibly if they had the means of going down to a very much greater depth the lode might quite equal their expectations; but that, of course, would require a large outlay of capital, and for that reason Capt. Eddy had deferred selecting the machinery which had been sent out until he made quite sure which would be the best place to erect it so as to get the utmost benefit for the company. Captain Eddy had also been instructed to explore the Serrito Mine, which was not far from the reduction-works at Livras. If any good result should come from that development the expense of carriage would be reduced to a minimum, for the mine was, he believed, within half-a-mile of the reduction-works. The latest advices with regard to the Serrito Mine were these. Writing on April 23—received that morning—Capt. Eddy said, with reference to the Serrito Mine:—

With reference to the Serrito ore I have about 10 lbs. weight from the pit cleaned up, which from appearance should go 20 ozs. to the ton; the only difficulty seems to be the quantity obtainable of this class of stuff. Then, writing on April 23, he says:—

Serrito Mine.—The horse of granite between both parts of the lode maintains its size in depth, and there is very little alteration in either part of the lode. From the footwall branch we have taken out 3 lbs. of quartz, containing visible gold; this with what was taken out last week makes altogether 13 lbs. of quartz, which I estimate at 20 ozs. to the ton. The other part of the footwall branch contains gold to pay for stamping, and the hanging branch traces.

Capt. Eddy was now working at the Serrito Mine; but the great point for them—if they could get sufficient capital was the Lagoa, of which the shareholders had often heard. The former company made a dam across the river, which gave way. They knew the value of the Lagoa, and wished to get all the gold they could out of it. Capt. Eddy was exploring the Lagoa in this way. He had agreed with the natives who were working there to buy all the gold they obtained, and he had been carefully watching the results of their operations.

Writing on March 31, with reference to the Lagoa, Capt. Eddy said:—

H. Eddy, March 31, 1888.—During the past few weeks the quantity of running water being only about 350 gallons per minute, I have given every encouragement to some of the old gold washers (by allowing them the results) to work in the lake. They have worked in the upper part of it, in 4 to 5 feet of water, and having carefully watched the results obtained I find that the gravel washed has given an average of 3½ dwt. of gold per ton, and I estimate there is 25,000 tons. The cost of draining to a sufficient depth by a canal and putting in a good sluice would be \$3000. The working cost (as the gold is free) would not exceed 2 dwt. per ton, leaving a profit of 1½ dwt. per ton on the above quantity of 25,000 tons, equal to 1875 ozs. of gold, which at 37,100 per ounce is 6560^l, against the above expenditure. This would, therefore, after providing a moderate allowance for contingencies, give a net profit of \$3000. Last summer being irregular, showing a large average quantity of water, no regular test results on which to base an estimate could be obtained. I had, therefore, to be guided principally by very conflicting reports, but during the past few weeks I consider the tests such as they are to be thoroughly relied on, and I see no reason why results on a large scale should not be equally satisfactory, more particularly as very little of the bottom gravel could be touched on account of its depth.

The shareholders would, therefore, see that if they had enough capital, say, \$3000, this could, according to Capt. Eddy's estimates, get a return of 6560^l. This was a matter of great importance, and would be at once proceeded with if they got a sufficient subscription to the debentures. Besides the Lagoa, the different streams which came down from the mountains could be explored in a similar way, and the beds of the streams taken out, washed, and amalgamated, and, no doubt, a great deal of gold would result from that operation. In this gold washing there was no expense for mining or anything in that way, and the gold obtained from it contained less silver and other metallic substances, and was, therefore, more valuable. The Chairman then moved the adoption of the report and accounts. Mr. THOMAS BUSH seconded the motion, which was adopted without discussion.

Mr. J. BERGTHEIL proposed the re-election of the retiring directors, Messrs. D. Keighaw, and Frank Baker. —Mr. BUSH seconded the proposition, which was carried.

On the motion of Mr. MARTINEAU, seconded by Mr. HART, Mr. P. Edinger was re-appointed auditor.

The CHAIRMAN remarked that the directors had the greatest confidence in Capt. Eddy, and they were certain that he was doing the best he possibly could for the company in the circumstances in which he was placed. Captain Eddy had great faith in the Aurora hill, and was building permanent houses of stone there.

Mr. BERGTHEIL thought it well that the shareholders should know what the Lagoa really was. It was a lake of water which had accumulated in thousands of years from the streams which came down from the hills bringing with them more or less gold. This gold by its own weight deposited itself at the bottom of

the lake. The natives had only been able to wash the outskirts of the lake, having no machinery with which to get deeper; but Captain Eddy having seen what the natives had done, and having bought gold of them, proposed to drain the lake and take the gold from the bottom. Even if he only got as much gold from that operation as the natives got by working at the sides there would be a profit of from \$3000 to \$4000^l, and he believed that if the necessary capital were obtained the operation would be a great success.

Mr. BERGTHEIL, in replying to Mr. MEYER, said Mr. Pooley left the company's service of his own accord. The directors had as much confidence in the Aurora Mine as they ever had, and they believed it would be found very rich in depth. It was proposed to develop the Lagoa, so as to provide the means for larger works in the Aurora, and some of the other mines.

Mr. MARTINEAU said Capt. Eddy had never sought after showy specimens, which were easily obtainable, but he had devoted himself to the permanent interests of the company. (Hear, hear.)

A vote of thanks was passed to the Chairman and directors and the meeting then closed.

DON PEDRO NORTH DEL REY GOLD MINING COMPANY.

An extraordinary general meeting of shareholders was held at the offices of the company, London Wall, on Tuesday (Mr. J. E. DAWSON in the chair), to confirm an agreement, dated May 11, to sell the property and assets to a new company.

The CHAIRMAN said: Gentlemen, the first thing, perhaps, I had better do to-day is to announce that we have received from Brazil a telegram from our manager, stating that Capt. Bawden agrees to allow an extension of time for the payment of the first instalment of the mortgage. We suggested in our letter to Mr. Heilbath that we should have till August 30; the reply comes back promptly, showing the good disposition on the part of Capt. Bawden:—"Bawden agrees." I mention that question of time because there was, perhaps, a feeling that Capt. Bawden might not have the interests of the company at heart; but he has always been a good friend to this company, and we have been good friends to him, for we have hired his blacks, and bought provisions of him, and I do not think there is any disposition on the part of Capt. Bawden to take advantage of his position. We have had one or two letters, but they are of no importance. They are scratching at surface, and getting a few off-t

of the expenses of the committee, the directors having no power to appropriate the funds of the company for that purpose.

Mr. SIDNEY said that the expense would be very light, and his client (Mr. Samuel) if elected on the committee was quite willing to bear his proportion of the expense.

The CHAIRMAN said, in reply to a question as to the providing of machinery, the directors had purposely refrained from providing any at present, as they first wanted to ascertain what would be the best machinery to employ, and at the same time they had to consider the limited funds of the company.

A resolution adjourning the meeting to the 23rd inst., and the appointment of a committee of three shareholders, with power to add to their number, to investigate the affairs of the company generally from its formation up to the present time, was agreed to, the following gentlemen being appointed members of the committee:—Mr. C. Samuel, Mr. C. Coleman, and Mr. R. J. Price.

A vote of thanks to the Chairman for presiding closed the meeting.

ARIZONA COPPER COMPANY.

An extraordinary general meeting of shareholders was held at Edinburgh on June 1.—Sheriff GUTHRIE SMITH in the chair.

The SECRETARY read the notice convening the meeting, the object of which was to hear a report from Mr. Duncan Smith, S.S.C., one of the directors, upon his visit to the company's mines.

Mr. DUNCAN SMITH in his report, which was a very lengthy one, detailed the operations which were being carried on at the various mines, as well as the progress in the construction of the railway by the company. In all they had about 60 different claims, and the extent of what was believed to be valuable and good property was over 1000 acres. In alluding to the prospects of the company, he quoted a report by the general manager, in which it was estimated that when the furnaces in course of erection were in operation the annual profit would be \$589,617, to which fell to be added \$50,000 as profit from stocks, and a like sum from the railway. He admitted that a mistake had been made in promising at the outset so large a dividend as 10 per cent. per annum. They had failed to make due allowance for the possibility of accidents, the fluctuations of the market, and the difficulties attending the commencement of so vast an undertaking.—At the conclusion of Mr. Smith's report, and after he had answered a number of questions put by shareholders, he was, on the motion of the CHAIRMAN, awarded a vote of thanks.

The CHAIRMAN said that the next business was the appointment of an additional director, and moved the election of Mr. Colin Mackenzie, of Portmore.

Mr. BRUCE JOHNSTONE, W.S., thought that before proceeding to the election of another director they should take up the third item on the programme of business, which was to consider the proposed commutation of the deferred shares as explained in circulars issued in April last. He pointed out that the present directors were all deferred shareholders, and if the capital were to be continued as at present the preferred shareholders should have an equal representation on the board; and, therefore, no nomination should emanate from the directors.

The CHAIRMAN thought the business should be taken up in the order in which it was given in the programme; and Mr. Mackenzie's nomination having been seconded by Mr. T. J. GORDON, it was, after some further discussion, agreed to.

Mr. GORDON then made a long statement with reference to the proposed commutation of deferred shares into preferred or ordinary shares. These deferred shares, 75,000 in number, had right to one-half of the old profits earned after payment of a dividend of 10 per cent. on the preferred shares, and under the proposed commutation they would be converted into shares of the second issue at the rate of 21 for each deferred share. He stated that the proposal had emanated not from the directorate, but from outside parties with whom they had communicated with a view to their joining the board of directors, and who stated that the existence of two classes of shares was an obstacle to their doing so. As a result of communications with the holders in America of deferred shares, the commutation had been proposed. The directors were satisfied that it would be for the interests of the company, although to the extent to which it was benefited the directors and other holders of deferred shares would suffer.

The CHAIRMAN asked the meeting for an expression of opinion on the proposal, intimating that the directors did not wish to take any part in the discussion.

Mr. BRUCE JOHNSTONE deprecates that meeting coming to any definite decision, and suggested an adjournment.—Mr. GARDINER, W.S., moved, and Mr. DICKSON seconded, that the shareholders accept the proposal of the directors.

Mr. JOHN WILSON held that it would be manifestly unfair both to the present and to the absent shareholders to ask that meeting to come to a vote on such an important point, and suggested further consideration of the proposal should be postponed to a subsequent meeting.

Mr. W. R. LAWSON criticised at considerable length the proposed commutation, and said he did not think they could do anything which in the interests of the company would be more unattractive than agree to it.—Several other gentlemen took part in the discussion, and ultimately a vote was taken on the motion for accepting the proposal, and an amendment adjourning the decision of the question to another meeting, to be held next week, with the result that the latter was carried by a majority of eight.

The meeting, which had lasted for nearly three hours, then terminated.

DARLINGTON STEEL AND IRON COMPANY.—The report and balance sheet to April 30—the first since the reconstruction—has just been issued. The year has been one of continued inactivity in the steel trade, and prices have receded considerably during the year. On taking office the directors immediately turned their attention to the improvement of the company's plant. Additional boiler power, which was much required, has been provided. The principal rail mill has been considerably improved, and modern bank and finishing machinery has been laid down with a view to expediting work and cheapening cost. Mr. Gjens' smelting pit process has been introduced with satisfactory results. The Springfield Works are, the directors regret to say, idle, and there is no prospect at present of a commencement of work there. Although 3407, £s. 5d. has been spent on improvements, the whole of which has been charged to revenue account, and under these circumstances it has not been considered necessary to write off anything for depreciation during the year. The subject of depreciation will, however, receive careful attention during the current year. The profit on the year's working is £10,812, 14s. 3d., less improvements to plant written off, £477, £s. 5d., leaving a balance of £4062, £s. 10d. Having in view the large amount of floating capital required to carry on the business in a satisfactory manner, the directors recommend the creation of a reserve for the present, and that the balance be thus appropriated.—Dividend on 7 per cent. preference shares, absorbing 2752, £s. 6d.; carried to reserve account, 3000£.; carried forward to next year, 1654, £s. 4d.; total, 7406, £s. 10d.

WEST MARY ANN.—At the meeting on June 1 (Mr. W. G. Nettle in the chair) the accounts for five months to end February showed a loss of £473, £s. 7d., and a debit balance of 4272, £s. 4d. A call of 5s. per share was made. Captain T. F. Tremellen, in reporting upon the property, says:—Our main efforts have been directed to the erection of the engine-house, boiler-house, and stack, together with the removal of the engine from Wheal Mary Ann, and the fixing it, which has in a great measure been completed; and, considering our progress in the commencement was impeded by the very unfavourable weather, we think it is a matter of satisfaction that we are so forward. We hope very shortly to have it at work, when the water will be drained to the bottom level, and thus enable us to sink our shaft as well as commence driving on the highly promising lode which is there to be found presenting every indication of amply repaying us for the outlay made.

CARN BREA.—At the meeting on Thursday the accounts showed a loss on the four months of 3131£., and a total debit balance of 8583£. A call of 10s. per share was made. In the agents' report it was mentioned that in the 286 fm. level, on the Highbury lode, driving east of the shaft, the lode was worth 40s. per fathom. In the 145 fm. level of the Druid south lode, driving east of Monument shaft, the lode was large, and worth £10 per fathom. It was very important that this end should be driven with all speed, as it would enable them to work the higher Druid Mine, which they hoped to commence by boring machinery during the coming quarter. Mr. Vivian, Hayle, moved, and Captain Clemens seconded, the adoption of the accounts and the report. The resolution having been agreed to, the Chairman remarked that, seeing they had made a loss on the four months' working of 3000£., and that they had a previous balance against them of 8000£., he thought a call of 10s. per share would meet the case. He did not think their prospects were worse, but, on the whole, he felt their position was better one. He was sanguine that the mine would still improve.

GAS SHARES.—The principal business in these shares, according to this evening's report of Messrs. W. L. WEBB and Co., of the Stock Exchange and Finch-lane, has been:—Brighton and Hove General Ordinary, 34%; Buenos Ayres Six per Cent. Debentures, 95%; ditto, New, 8% to 8%; Continental Union (Limited), 28% to 28%; European New, 7%; Gas Light and Coke, A (Ordinary), 18½% to 19%; ditto, D, 10 per cent., pref., 22%; Hong Kong and China, 16½%; Imperial and Continental, 200 to 201; London and Gas Light Ordinary, 218 to 219; Mauritius, 17%; Monte Video (Limited), 15% to 15%; Oriental (Limited), 7½%; ditto, New, 6%; ditto, 6 per cent., 1%; Rio de Janeiro, 28% to 24%; South Metropolitan B, 19½% to 192. Gas stocks firm, but little doing.

INSURANCE SHARES have, according to this evening's report of Messrs. W. L. WEBB and Co., of the Stock Exchange and Finch-lane, been dealt in as follows:—City of London Fire (Limited), 7½ to 8%; Commercial Union, 19% to 19%; Employers' Liability Association Corporation (Limited), 21½ to 2½%; Fire Insurance Association (Limited), 25% to 21%; Guardian Fire and Life, 53%; Imperial Fire, 14½ to 14%; London, 58%; London and Provincial Fire (Limited), 7½ to 7%; Liverpool, London, and Globe Fire and Life, 20%; Merchants' Marine, 14%; Provident Life, 253 to 254; Rock Life, 8; Royal Exchange, 40½ to 41%; Universal Marine, 6%. Fire insurance companies flat. Marine companies steady.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr. W. ABBOTT, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

ORGANOS GOLD.—The strongest views are expressed regarding the ultimate success of this concern and the richness of the quartz as shown by recent crushings and the small capital of the company tend greatly to support them. Quartz yielding an average as that at Organos, 28 ozs. of gold per ton, can hardly fail to yield a handsome profit, while the total capital of the company being only 15,000£., it is remarked that the smallest returns will yield a proportionately large dividend.

THE COAL TRADE.

Mr. J. R. Scott, the Registrar of the London Coal Market, has published the following statistics of imports and exports of coals into and from the port and district of London, by sea, railway, and canal, during May, 1883:—

		IMPORTS.			
By Sea.	Ships.	Tons.	By Railway and Canal.		
Newcastle	121	114,855	Lond. & N.-Western	129,316	1
Sunderland	105	78,951	Great Northern	55,492	0
Seaham	13	8,306	Great Western	100,233	0
Hartlepool	48	23,126	Midland	169,733	9
Middlesborough	2	1,360	Great Eastern	55,376	12
Scotch	10	3,449	South-Western	4,846	12
Welsh	23	21,821	London, Chatham, and		
Yorkshire	13	2,076	Dover	10	0
Cumberland	—	—	South-Eastern	1,896	4
Duff	—	—	London, Brighton, and		
South Coast	19	3,293	South Coast		
Cinders	2	216	Grand Junction Canal	752	5
Colonial	8	4,531			
Total	355	261,804	Total	557,681	18
Imports—1882	403	281,557	Imports—1882	506,142	6

Comparative Statement, 1882 and 1883.

		By Sea.		By Railway and Canal.		Tons cwt.	
Jan. 1 to May 31, 1883.	2085.	1,675,564	Ships.	Tons.	Jan. 1 to May 31, 1882.	2,809,339	8
Jan. 1 to May 31, 1882.	2202.	1,628,763			Jan. 1 to May 31, 1882.	2,585,474	4
Increase—1883	—	—			Increase—1883	—	223,865
Decrease—1883	—	117					4

EXPORTS.

Railway-borne coal passing "In transitu" through district	... Tons	94,601
Sea-borne coal exported to British Possessions, or to foreign parts, or to the coast	... Tons	87,424
Ditto sent beyond limits by railway	... Tons	21,649
Ditto by canal and inland navigation	... Tons	1,428 = 109,901
Railway-borne coal exported to British Possessions, or to foreign parts, or to the coast	... Tons	38,343
Ditto by rail beyond limits	... Tons	52
Ditto, by canal and inland navigation	... Tons	56 = 38,451
Sea-borne coal brought into port, & exported in same ships	... Tons	2,051
Total quantity of coal conveyed beyond limits of coal duty district	... Tons	245,014
During May, 1883	... Tons	221,836

Comparative Statement, 1882 and 1883.

Total distribution of coal from Jan. 1 to May 31, 1883	... Tons	1,187,087
Total distribution of coal from Jan. 1 to May 31, 1882	... Tons	1,141,157
Increase in the present year	... Tons	45,930

General Statement, 1882 and 1883.

Increase in coals imported by sea during the present year → 46,801

Increase in coals imported by railway and canal → 3,865 → 666

Less increase in coals exported → 930

Total increase in trade within the London district during present year → 224,738

THE TIN TRADE.

Messrs. STRAUSS and Co. (London, May 31) issue the following Statistics of Tin:—

April 30, May 31, May 31,

1883. 1883. 1882.

Straits and Australian, spot. Tons 5,178 5,890 7,894

Straits, afloat. Tons 948 331 484

Australian afloat. Tons 1,285 805 125

Australian at anchor. Tons 1,398 1,770 987

Banca, on warrants. Tons 1,010 1,479 1,426

Billiton, spot. Tons 2,102 2,014 1,100

Australian tin in Holland. Tons 1,309 1,055 854

Stocks in America, including quantity afloat. Tons 3,180 3,075 2,530

Total 16,417 16,423 15,479

FOREIGN MINES.

ALMADA AND TIRITO CONSOLIDATED SILVER.—Week ending May 5: 45 bars of ore extracted, about 300 English tons. Roasted pulp, average of 10 assays, 7½ 2d. per ton. The 100 drift north of pay streak, 7 tons milling ore per cubic fathom. The 40 ft. level pay streak, 5 ft. wide, 11 tons milling ore per fathom. The 45 drift north pay streak, 2 ft. wide, 4½ tons milling ore per fathom. Stope in back of the 45 drift, solid ore, and presents a fine appearance, 13 tons per fathom. Winze in the 45 drift pay streak, 4 ft. wide, 12 tons milling ore per fathom. The indications in the bottom are very favourable for a continuation of this lode in depth, and preparations are being made to attack the lode by a western cross-cut from the 12 fm. level. Rise in back of the 45 pay streak, 4 ft. wide, worth 11 tons of milling ore per cubic fathom.

BELT COPPER.—A. Brand, May 9: My last report was dated April 18.—Champion, No. 1 West: No work has been done here since my last owing to the heavy rains making a large amount of water in the crossing.—No. 1 Level East: No change to report in this level; the vein looks fair.—No. 2 West: This level still continues good in stamp copper, with an occasional piece of barrel work.—No. 2 Level East: This level continues much the same, with light and heavy copper.—Champion Shaft: We have got heavy copper at both ends of the shaft, and altogether it looks well.—Knowlton Shaft: This shaft is very good both in heavy and light copper. This morning we have on the footwall 2 ft. of a mixed amygdaloid epidote and calcite, all heavily charged with small silver.—Underground work done in April: First level west driven 11½ ft.; ditto east, 17½ ft.; second level east, 13 ft.; ditto west, 24½ ft.; Champion shaft sunk, 11 ft.; Knowlton shaft sunk, 6½ ft. Nothing further to report.

CALIFORNIA GOLD.—Mr. Alfred Rickard, manager at the mine, May 5, states: After having excavated the pay in stoping for flats at the 1400 ft. level, east and west of shaft, a certain amount of work has been done on either side in wall rock to give the necessary width to the flats. They are now nearly completed. The 1300 ft. level west is in 479 ft.; no improvement is apparent in the nature of the vein-stops. The stope of this level have somewhat fallen off in value; the output is 9 tons of milling ore per fathom. The No. 1 rise of the 1250 ft. level east is up 6 ft.; the lode is large, but the pay streak is only 1½ ft. wide, of a fair grade for milling. The No. 2 rise of the same level is also up 6 ft.; the lode is 2 ft. wide, yielding 5 tons of good milling ore per fathom, whilst in the stope of this level the lode is fully 3 ft. wide, yielding 8 tons of good milling ore, and 1 ton of smelting ore per fathom. Also in the same level a few feet of drift have been put out to test the nature of the south vein east of its junction with the main lode. The rise in the 1100 level west is up 6 ft.; the object of this rise is to test the ground over the end where the lode presents some favourable indications for the discovery of a better grade ore than has been met with in the drift. The rise is at 400 ft. from shaft. The ground lately worked in the stope of the 1100 ft. level east has opened out into a strong body of ore, which will be easier to excavate per square fathom than on tribute. The men are now engaged in stripping down the footwall vein in the lower portion of the stope where the lode is 5 ft. wide, yielding 10 tons of good grade milling, and 1 ton of smelting ore per square fathom.

Mr. Rickard telegraphed the directors on the 7th inst., as follows:—"Mill run (40th week), 305 tons; yield \$4200 (84%). Smelting ore sales \$1400 (2804); shaft sinking in good ore."

COLORADO UNITED.—Mr. Macrae, May 12: The 13th level east, from Silver Ore shaft, is looking a trifle better, the streak being more solid, and averaging from 2 to 3 in. of mineral. The 12th level, east of Silver Ore shaft, still continues to improve, the concentrating ore in the bottom of the drift giving place to some good capping ore from 1 to 2 in. in width. The winze No. 2 from 12 to 13 level still looks well, and carries 3 in. of good capping mineral. No. 2 stope at the back of the 12th level has changed but little, carrying about 3 in. of ore. No. 3 stope at the back of the 12th level carries 4 in. of good galena ore. There is no further change in the appearance of the shaft. The drift on the James G. Blaine shaft, east and west of the tunnel, shows no change. In my letter of April 23 I reported that we were driving a cross-cut from the Brown lode to meet the Coin lode. The latter has now been struck, carrying from 12 to 15 in. of quartz, with a little mineral mixed through it. The mill has been running well every day except Friday, when we shut down to clean out the floors under the slime tables. The following sacks of ore have been sent to the buyers during the week:—179 sacks second-class copped ore weighing 9 tons 1622 lbs.; 61 sacks of fine headings, weighing 3 tons 350 lbs.; 28 sacks screenings, weighing 1 ton 450 lbs.; total 266 sacks, weighing 14 tons 482 lbs.

DENVER GOLD.—Frank S. Craven, May 22: The 900 west drift is in 636 ft. from the shaft. The crevice shows some improvement. The 1050 west drift is in 212 ft. The crevice is 4 ft. wide, and mills 1-5th oz. gold per ton, showing an advance in quantity and quality. The 1150 west drift is in 473 ft. It is much softer, and shows an improvement in the crevice. The 1-75 west drift is in 381 ft. The crevice is 1 ft. wide, and yields ½ oz. gold per ton. The 1350 west drift is in 145 ft. There has been a decided improvement in the crevice, which is 10 in. wide and carries some solid mineral. The 1350 east drift is in 45 ft., and shows no change.

DEVALA MOYAR GOLD.—Mine Manager, May 14: I have been obliged to stop sinking the shaft for a few days until the pump arrives; meanwhile we are putting up the building to cover the engine, placing the engine in position, and laying the foundation to carry the pumping gear. The water is very light and the sinking good, but it is slow work drawing the water and earth up 110 ft. in a bucket holding only 10 gallons. When the pump is erected this will be nothing. In anticipation of the monsoon I have taken all necessary precautions to secure the drives, tunnels, and shafts, and in consequence do not anticipate any trouble. As regards the deep shaft at 100 ft. from the surface the rains will make very little difference in the amount of drainage.

HOOVER HILL GOLD.—May 24: The winze in the Gallimore at 130 is yielding some very pretty specimens, and a considerable quantity of fair milling ore. In the tunnel stope, owing to the difficulty with increasing depth of handling the ore and water by a windlass and hand pump, work is being confined to sinking a winze. The ore in the bottom is of lower grade than usual, owing, I think, to the main orebody or chimney pitching away more to north-east. When we make communication here with the drift, which is being brought in from the Hawkins shaft, and begin to stope the ore way we will be better able to follow the main body. The drift west from the bottom of the Hawkins shaft has heretofore been in rather tight ground, which now shows signs of becoming easier. The mill has been running regularly.

KAPANGA.—James Thomas, April 21: crushing: For the past month there has been 8 tons of general stuff crushed of the poorest grade yet met with, producing 21 ozs., with 65 lbs. of specimens, yielding 67 ozs. 5 dwt., the total yield being 68 ozs. 5 dwt., of melted gold, giving an average yield of a little over 1 oz. per ton.—The 50, Scotty's Lode, No. 1. Rise South: The No. 1 stope north has been further stopped 43 ft. long by 8 ft. high. The No. 2 stope 35 ft. long by 6 ft. high. The No. 3 stope 35 ft. long by 6 ft. high. The lode in each stope has averaged about 2 ft. wide, of the usual kindly quartz and flocuan, the latter being much intermixed with fine mumble. The three stope have occasionally produced some rich specimens during the month, but not in quantity as some previous months, and when the specimens were not seen the lodestones proved poorer than usual, which accounts for a smaller return this month. The lode is of such a bumpy character that any moment may bring us in a rich patch of specimens.

North End: This end has been further driven north 12 ft., length from cross-cut 80 ft. The lode is at present split into branches by a large boulder coming in the forebreast; when we get clear of the boulder the lode is sure to come settled and regular again. No. 2 rise, south of cross-cut, has been further stopped 40 ft. long by 6 ft. high; some strong spots of gold have been seen here, but no specimens were obtained.—70, Scotty's Lode: The No. 1 rise south has been further pushed up 10 ft. high by 10 ft. long: total height 120 ft. The lode is still squeezed, consisting of a black scum of tough flocuan. In consequence of hoisting the main winze water we had to place the men from this rise to assist the men engaged in the hoisting for a part of the month, which is the reason there has not been more work done in this regard.

No. 1 Stope, North of Rise: Only a little work could be done here this month in consequence of hoisting the water, as it would not do for the men to stay in the rise. Ground 8 ft. long by 6 ft. high has been stopped. The lode is looking very promising, occasionally showing blottches of coarse gold.—70, Kapanga Lode: The main, or No. 1, hoiling rise north 33 ft. from the bottom of the intermediate cross-cut end, on a channel of soft flocuan country; the lode is very regular, being of decomposed gritty quartz, averaging from 10 to 15 in. in width, which is letting out streams of water, making it exceedingly slow, and uncomfortable for the men working. The height now attained is about as high as the No. 7 level, which is calculated to be 18 to 20 ft. west of the rise. By breaking a few feet in the hanging-wall will I expect drain off all the water speedily, when a communication to the No. 7 level can be effected at once. Two men left this week, as they were afraid to work in this dangerous rise. The water in the main winze under the 50 is gradually draining at the rate of 14 in. in 24 hours, and as the rise gets nearer the water the drainage will daily increase.

South End: This end has been driven further on the course of the lode 14 ft., length from cross-cut 69 ft. In driving the last 20 ft. we made a bend nearly due west, at that direction it will soon junction with the hanging-wall, which may prove to be the south end or last of the "horse." The lode in taking this turn has been squeezed, becoming tight for working.—Specimens: The specimens this month came about equal proportions from the three stope at the 50, Scotty's lode. All operations are progressing steadily, with general good encouragement showing throughout.

KOHINOOR AND DONALDSON CONSOLIDATED.—Mr. Alfred Rickard, in his report for the week ending May 12, says respecting the Donaldson Mine:—The No. 2 and No. 3 stope are yielding 1½ ton of smelting and 2 tons of milling ore per fathom, and the stope of the intermediate level are yielding ½ ton of smelting and 1 ton of milling ore per fathom; steady progress is being made by the tributaries, and the condition of the stope is such as to admit of a remunerative output. The No. 4 stope are yielding 2 tons of milling ore per fm. in the Champion Mine the stope of the 200 west maintain their yield at the rate of 5 tons per square fathom. The stope in the 400 east is yielding 1 ton of smelting and 3 tons of milling ore per fathom; the lode is in two branches, making together 1½ ft. of mineral of fair grade. The 520 ft. level west is in 140 ft.; the lode is smaller, now 3 ft. wide, and the yield per fathom is 7 tons, of which 1 ton is smelting ore. The mineral is of an argenteiferous nature, and is treated to great disadvantage in a stamp mill. It is absolutely necessary to get proper concentrating facilities to handle such material profitably. The drift has been widened and trac laid in. The rise in the 520 east is up 57 ft.; the lode carries a little ore. The work in the shaft is progressing somewhat slowly on account of the heavy nature of the ground immediately below the 520, where large timbers are required. Work at the Kohinoor and Donaldson mill is progressing fairly, and a strong force of carpenters will be put on in the coming week with the object of completing the building by the end of the month. The new mill now so nearly completed is especially designed to treat the class of ore which the mines chiefly contain, and which without the proper concentrating facilities referred to above it was desirable to leave in reserve. The existing reserves of ore are now so large that it is not considered necessary to push the developments till the ore can be forwarded to the new mill.

The resident director wrote under date of June 7:—Just sold 9 tons Donaldson ore for over \$1500 net."

LAKE SUPERIOR NATIVE COPPER.—Capt. Williams, May 7: No. 1 shaft sinking on the course of the lode below No. 3 levels sunk 4 ft. 8 in.; lode still poor, with no change to note. No. 2 level south advanced 10 ft. 11 in., and no change. No. 2 level north advanced 8 ft., producing good native copper. No. 1 level north advanced 8 ft., producing good mill work. No. 1 level south advanced 15 ft. 6 in., producing good saving work for native copper. We shall have completed solar, &c., at the No. 3 level to-day, and at once begin driving

north and south on course of lode. We should have done this sooner, but I thought it advisable to sink a few feet more in the shaft, so as not to have to remove the solar again when we resume sinking. In cutting down bottom of No. 3 shaft, I find the hanging-wall part of the lode has very much improved, and for 2 ft. wide produces very fine native copper and a little native silver. This part of the lode widens very fast as depth is attained, and I have to-day resumed sinking this shaft below the No. 1 level, and have no doubt we shall have very favourable results. In No. 1 shaft I think the native copper bearing part of the lode has again gone off in the hanging wall; this I shall prove by cross-cutting as soon as the No. 3 levels are advanced far enough off the shaft to allow doing so. We are making good progress at surface, and all machinery is working well.

NEW EMMA.—George Cullins, May 14: Since my letter of the 7th inst. the shaft has been sunk 4 ft., and the cross-cut has been extended 10 ft., making the depth of shaft now 25 ft., and the length of cross-cut 69 ft. from station. No change in the rock. Water about the same.

PESTARENA UNITED.—William Roberts, Henry P. Clemons, May 31: District of Pestarena: On No. 5 lode the 33 end north is yielding 7 tons of ore per fathom, at 7 dwt., of gold per ton; the lode is composed of strong quartz, with veins of arsenical pyrites against the walls. The 55 end south is in hard micaceous rock, traversed by quartz strings, with a leader of pyrites on the footwall, yielding 3 tons per fathom, at 1 oz. 3 dwt. per ton. The 65 south carries a small band of decomposed schist on the footwall, with occasional strings of ore, not to value. The 80 north is in a regular lode, enclosed in stiff micaceous schist, and yields 5 tons per fathom, at 1 oz. 4 dwt. per fathom. The 80 south is being driven in a large lode of quartz, schist, and pyrites, yielding 5 tons per fathom, at 4 dwt. per ton. The 90 north carries a lode of quartz, sparsely impregnated with pyrites, yielding 4 tons per fathom, at 10 dwt. per ton. The 90 south continues in hard micaceous rock, and carries a mixed lode of calcareous quartz and schist, yielding but little ore. The 80 north, on No. 1 lode, is in stiff schist, with a good visionary line of lode. The 100 cross-cut, on western branches, follows on the small and variable veins of pyrites, and yields a little saving work.

The drift south, over the 110 fm. level south, is in easy felspathic schist, enclosing a small, but compact, bunch of pyrites, yielding 3 tons per fathom, at 12 dwt. per ton. The 120 north is giving 3 tons per fathom, at 1 oz. per ton; the lode is small. In the 130 north we are getting 1½ ton per fathom, at 9 dwt.; the lode is within two good walls, and carries a branch of ore on the eastern part. The south end of this level is passing through calcarious schist, with the lode much contracted, and is now producing 2 tons per fathom, at 10 dwt. per ton. The adit, driving south at Pozzone, is in indurated micaceous rock, and yields a little saving work from occasional strings of ore on the eastern part. All machinery at surface and in the mine continues in good working order, and all operations progress steadily. During the month of May 562 tons of ore were reduced, and 383 ozs. 17 dwt. of bar gold produced, the average yield per ton being 13 dwt. 15½ grs.

Henry J. Gifford: Val Toppa: The No. 1 level south, on new lode, is in much harder ground, the schist being very compact. A good footwall still exists, but the lode has narrowed considerably, and is now yielding 4 tons per fathom, at 6 dwt. per ton. The exploratory drift above the back is now communicated with No. 1 level, just behind the end of the flat stope beneath, showing that ore continued downwards till it met this flat lode, which cut off against it. The men are now put to stope in the back of this drift. No. 2 end south, on new lode, continues in hard sterile schist, without any signs of ore. The intermediate level under Zero stop on west lode is yielding 9 tons per fathom at 9 dwt. per ton; the lode throughout is spotted with galena and pyrites. The intermediate of No. 2 level is being driven in the bottom of a vertical lode of quartz, which shows patches of pyrites, and is about 2 metres wide, yielding 20 tons per fathom at 6 dwt. per ton. The ore reduced in May was 192 tons, which gave 89 ozs. 14 dwt. of gold, showing an average yield of 9 dwt. 8½ grs. per ton.

PIERREFITTE.—Manager, June 4: Since my last report, of the 23rd ult., I am pleased to say we have cut into the lode in the rise in the new adit level, and find, as far as seen, that it is good for silver-lead. We have opened out on it but very little, neither shall we until we make a communication with the level above. The men are now rising and sinking to attain this object as fast as possible, after which we shall be able to drive and stope. I calculate that if we make as good progress as we have been doing the last few days we shall make this communication in about a fortnight. The winze—the water from which drained in 24 hours after we met the lode below—is now being sunk again, and is down about 5 fms. The lode in the bottom of this winze is very good, being worth 3 tons of silver-lead ore per fm. An improvement has taken place in the value of the lode in the advancement going north-west, and is worth 2½ or 3 tons of lead ore per fm. The various stope about the usual value, worth 1 to 3 tons of lead ore per cubic fathom. We have engaged a few extra miners, and shall resume the driving of the south-east end, which has been stopped for a considerable time for want of hands. Some ore has been sent down from the lode in new level by the new incline railway. The latter and the brake gear answer their purpose admirably well. Our stone-breaker has caused us a good deal of trouble during the past fortnight, and that has somewhat interfered with our dressing operations: 500 tons of ore have been broken and sent to the floors during that time, but 432 tons of this only has been treated, and from which we have extracted 68 tons of silver-lead. The parts of the lode on which we are working contain very little blonde, and consequently we dress but a small quantity. The weather is still extremely hot, and the snow on the mountains is diminishing very fast. Our water supply is good, but we cannot expect it to continue so long. The steam-engine, however, will soon be ready to take the place of the water-power.

PONTGIBAUD.—W. H. Rickards, June 1: Monthly Report: Roure Mine: The 225 metre level, south of Taylor's shaft, continues to be driven on a regular lode, which produces stones of orestuff of low quality. The lode in the 200 metre level south yields low grade orestuff. The stope in the back of this level yields fair quality orestuff. The lode in the 175 metre level south is composed of jointed quartz, containing iron pyrites. The 80 metre level north of cross-cut, in eastern split of Virginie's lode, yields a little orestuff, and promises to improve. The same level south of cross-cut from Brugere's winze, yields ½ ton of ore per current metre. The 60 metre level north, on northern split of the lode, yields ¼ ton of ore per current metre. The same level north of Bolisy's winze is unproductive. The 20 metre level south, on eastern part of Virginie's lode, shows spots of ore. The same level north is unproductive.—St. Denis: The lode in the 50 metre level north of shaft presents a regular appearance, and yields orestuff of average grade. The same level south yields low grade orestuff. The 30 metre level north yields stones of ore. The lode in the No. 1 winze yields stones of orestuff irregularly.

La Brousse: The 2.0 metre level, north of Alice's shaft, yields low-grade orestuff. The lode in the same level, south from shaft, is unproductive. The 160 metre level south yields no ore to value. The lode in the same level north presents a good appearance, yielding ¾ ton of ore per current metre. We have set to enlarge this level to the full width of the lode, which is 3 metres of good orestuff. The 120 metre level, north of Bassett's shaft, is unproductive. In the 100 metre level, in the same direction, the lode is disordered and the rock hard. The 80 metre level south continues in soft, disordered, unproductive rock. The 40 on the eastern branch, yields stones of ore. The cross-cut in the 20, towards the latter named vein, has gone on favourably; we hope to intersect it in a few metres more driving.—Pranal: The 110 metre level, north of St. George's shaft, shows spots of ore. The same level north is unproductive.—St. Denis: The lode in the 50 metre level north of shaft presents a regular appearance, and yields orestuff of average grade. The same level south yields low grade orestuff. The 30 metre level north yields stones of ore. The lode in the No. 1 winze yields stones of orestuff irregularly.

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POTOSI GOLD.—Mr. Fitzgerald, May 7: The Peru lode is coming out beautifully, and Kelly is very anxious to gain another 20 ft. to drift and form stops. We have not connected the air shafts and do not intend to, as the unprofitable results in cutting through so much bad ground would be so great a loss of capital to warrant its undertaking. The No. 1 shaft is ventilated by the difference in pressure of atmosphere in the two compartments, the one with the steam-pipe being a warm light air on account of steam and heat, while the hoist compartment is quite cool, and a perfect circulation maintained through this influence. As soon as the works are self-sustaining something will be done towards a vertical shaft near the superstructure leading to Chile lode works east of the mill and road. The main hoist shaft on Chile lode advanced 22 ft. from April 12 to April 20. The test level driven on the course of the lode was in 55 feet. The tram tunnel was in 60 ft. as is doubtless by this time connected with the lode. Of the tram from the tunnel to the head of incline 200 ft. was laid, and cars working on it hauling the excavated matter to the brow of the hill. The tram from the mill was also being constructed rapidly towards the incline or gravity road. The pans and settlers about completed, and the work about the mill finished as near possible until the remainder of the machinery could be had. The No. 3 vertical shaft on Peru was 103 ft. deep, and 54 ft. of it in solid blue stone, consequently, perfect walls will be had at that point. Kelly concludes by saying "everything looks very prosperous and satisfactory." I received a letter from Señor Chártier, the director of the bank at Callao, stating that the Chile works at Peru looked admirably, and the ore better by far than when I left. The freights per Anita are nearly all dispatched from Las Tablas, and we are approaching the desired terminus of this long struggle with magnificent prospects of a rich

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BRITISH MINES.

ANDERTON TIN.—W. J. Bowhay, June 7: I have no material change to report since previous report on May 23. Everything is going forward quite satisfactorily, the lode fully maintains its character, the stamping is showing good results, and the erection of the new machinery is being pushed on as before reported.

BEDFORD UNITED.—H. Trezise, June 5: North Lode: There is no change to report in the 15 east. The lode in the 1 west maintains its size and value; worth 122 per fathom. The stope behind the end are worth respectively 92, per fathom. The tribute department is without alteration.—McCallum's Engine Shaft: The lode in the 62 east is of a very promising character, composed of peach, mundic, capel, and some good quality ore. The 62 west is without change. Good progress is being made in driving both ends. The lode in the 42 east is not so good for ore, but the lode is very strong and masterly in appearance. In the 30 east the lode is not improved since last report. The several stope in the back and bottom of the 30 are without alteration. In the 20 east the lode is unproductive. Good progress is being made throughout the mine.

BLUE HILLS.—S. Bennetts, R. Harris, H. Gripe, June 5: The lode in the 65 east end is 8 ft. wide, and worth 62 per fathom. The Baldwin lode in the 54 west end is somewhat unsettled and unproductive, near a small gossan; the 54 east end is producing low quality tin-stuff. The 42 east end is worth 72 per fathom. In the 31 east end the lode is 9 in. to 1 ft. wide, composed of low quality tin-stuff. In the Gumpas adit west end there no change to notice.

BRADA.—R. Rowe, June 5: The lode in the 4 end, driving north, continues to be worth, as has reported, from 2½ to 3 tons of copper ore per fathom, from 6 to 8 per cent. value; this is all in new ground. The stope in this level are yielding good ore-stuff for the dressing floors. In Prior's end, the lode during the week has fully maintained the value of last report, from 1½ to 2 tons of ore per fathom, worth 6 to 8 per cent. The stope behind this end are yielding good ore, and are improving as they go south into new ground, where I believe we are on the eve of a much richer lode than ever yet seen in the mine.

CARN CAMBORNE.—W. C. Vivian, June 7: In the 105 fm. level cross-cut, south from engine-shaft, the granite contains its hard, and our progress is, therefore, not so rapid as we desire. In the 95 fm. level, east of sump on the south lode, we are cutting through the lode, which we find composed almost entirely of chlorite (peach), which is the most abundant matrix of tin; it, therefore, seems probable that by opening out this lode valuable discoveries of tin may be made. In rising in the back of the 95 fm. level, west of sump, we continue to lay open a lode of good size, composed of fluor-spars and copper ore. In the 40 fm. level, west of engine-shaft cross-cut, on the north lode, we are now driving on the south wall, and carrying a width of 4 ft. (the whole lode being 11 ft. wide), which presents the same encouraging features as those referred to in my recent reports, the composition being blende, quartz, and soft spar, with patches and veins of yellow copper ore.

CARNARVON COPPER.—J. Roberts, W. Darby, June 5: The cross-cut at the 46 is not quite so ore-y as it was, but the lode itself is more kindly in appearance, and letting out more water than it has been. The ore-bearing part of the lode is about 2 ft. wide, and has copper scattered throughout it.

CARNARVONSHIRE GREAT CONSOLS.—W. H. Borlase, June 7: The sinking of the new shaft on the course of the lode is progressing very satisfactorily; present depth 2 fms. 4 ft., where we find the lode still very porous, and producing good saving work for lead. This all-important feature I am pleased to say steadily improves as depth is attained, and the general appearance of the lode is all that can be desired for making shortly a very productive lode. No alteration in the 14 east since last report.

CATHEDRAL CONSOLS.—Stephen Davey, Stephen Davey, jun., June 7: We are pleased to say we have passed through the decomposed ground in the 62 east, and have got a settled lode, which is 4 ft. wide, composed of quartz, prian, and fluor-spars, worth for tin 62 per fathom; the lode is easy for development, and the water highly charged with copper; and should the lode continue as at present we shall remove some of the men to clear up and put the shaft in working order below.

CONWAY VALLEY FREEHOLD COPPER.—H. B. Veree, R. Edwards, June 7: The only change to report in the mine this week is the intersection of a cavity in the 42 south, from which we have taken some rich stones of copper ore; there is a large stream of water flowing from it, and which has completely drained the other portion of this level. The ground around the cavity is of a loose and broken nature, and we are, therefore, enabled to make much better progress in driving; the end altogether presents a much more promising appearance than it did at the date of our last report; the lode then was very hard, and only very slow progress could be made. I hope now we shall get on speedily underneath the ore ground seen in the 3 south. In the 42 north there is no change. We are going on pretty well with crushing and dressing, and shall be able to sell a parcel of ore by the end of this month.

CREIGIOG.—H. Hotchkiss, June 5: There is no important change in our eastern workings to report to-day, the different points under development being much the same.—Meadow Shaft: The work of dividing this shaft is being urged on with all speed possible. We have put in about 15 fathoms of divisions, casting, and ladders, and I expect better progress to be made as we ascend nearer the surface, as everything will be getting more handy.

CWM DWYFOR AND BRYNARIAN.—Brynnarion Mine).—J. Davies, June 5: Joseph's Level: We continue driving this level due south, but the ground is tough.—Pensarn: The lode in the 20 driving north has been for the last few days rather softer than usual, but it is now getting more firm, and I expect to get something in it. We have a good wall on the west side, and we occasionally get nice strings of lead, but not yet to value. As the lode looks so promising I expect an improvement here.

D'EMESY MOUNTAIN.—J. Roberts, W. Sandor, June 5: The stopes in the bottom of No. 5 cross-cut is improving continually, and to-day we have blasted down better stuff from here than we have done since we commenced the stoping.

The lode under the old pass, on the hanging side, is looking quite as good as we have reported on former weeks. We have just started the end to drive further south from this point. This, of course, is in the soft, and could not show the lead in the lode till opened on; but the ground is of a soft character, being set only at 31 lbs. per fathom.

DEVON FRIENDSHIP.—F. R. W. Daw, W. Gill, June 7: The 42 fm. end, west of Bennett's shaft, is a little easier for driving, and the men are making good progress. We have cut a little water in this end, which is draining the 30 fm. level above, and we hope shortly to commence sinking the winze, already reported on, in the 31 fm. level. All other points without any alteration since we reported last week.

DEVON GREAT CONSOLS.—Isaac Richards, June 7: Wheal Emma: Inclined Shaft: In the 137 east the lode is at present small and unproductive.—New Shaft, New South Lode: In the 115 east the lode is from 3 to 4 ft. wide, and yields 1 ton of copper ore and 2 tons of mundic per fathom.—Railway Shaft: At the 203 west on the south part of the lode, the drivage is being carried on by the side of the lode for more speedy progress. In the 190 west, on the south part of the lode, the lode is 3 ft. wide, of a promising character, and yields small quantities of copper and mundic ores. In the 180 fm. level west, on the south part of the lode, the lode is 3 ft. wide, of a promising character, and yields 1 ton of copper ore, and 2 tons of mundic per fathom.—Watson's: At the 100 fm. level in the engine-shaft a trip plat is being cut preparatory to further deepening sinking below this level. In the 100 fm. level, west of the western shaft, the lode is 4 ft. wide, of a promising character, and yields small quantities of copper and mundic ores. In the 22 fm. level, east and west of the western shaft, the lode is 1½ ft. wide, consisting principally of capel and quartz in the 20 fm. level, east of the western shaft, the lode is 3 ft. wide, composed of capel and quartz, with peach, mundic, and some copper ore of good quality.

DEVON GREAT UNITED.—Isaac Richards, June 7: In the 120, east of Willesford's shaft, the lode is 3 ft. wide, composed of strong copper, with quartz, peach, mundic, and a little copper ore. In the 120, west of Willesford's shaft, the lode is 3 ft. wide, and continues to yield some good quality copper and arsenical ores. This level has been driven 1 fm. 3 ft. during the past week. In the cross-cut north at the 60, west of Watson's shaft on the middle lode, the ground is of a congenial character for the production of mineral and tolerably favourable for progress. Driving has, however, been slow in consequence of not having a full pair of men to carry on the work.

EAST BLUE HILLS.—S. Bennetts, W. K. Mitchell, June 6: In the adit east end there has not been much change to notice, either in the width or value of the lode since last reported on. The three stope in the back of this level are worth in the aggregate 202 per fathom. In the 40 east end the south part of the lode is producing some little tin-stuff, but not of much value. And in the 30 east end it is somewhat improving, and showing some good tin-stuff.

EAST BOTALLACK.—Thos. Trahair, June 5: The men are busy in putting in pitwork and fixing stands for flat-rods to get the engine to work as quick as possible; we hope to get it to work this week.

EAST CARADON.—Wm. George, John Kellow, June 6: We beg to hand you the following report of our setting on Saturday last:—To drive the 150, east on the counter lode, by nine men, with the boring machine, while good progress is being made, and from the character of the ground, as well as from dialling, believe we are getting very near the cross-course, and we hope soon to let down the water from the winze sunk 10 fms. below the 130, about 10 fms. east, in which they had a very prominent lode throughout. We have suspended the sinking below the 130 south, not finding the branches to improve as expected, and have started a trial rise in back on some branches, by six men, at 102, producing 1 ton of copper ore per fathom. To sink the winze below the 90, west of Chud's lode, by four men, at 72, producing 1 ton of ore per fathom. We have about 3 fms. more to sink to communicate with the 130, which will open out fair tribute ground. We have set four tribute pitches to eight men at 12a, to 13a, 4a, in 12, and have estimated our copper ore for sale on the 21st inst. at 75 tons.

EAST CHIVERTON.—R. Southey, June 6: The winze sinking in the bottom of the 90, west of the counter lode, has been hoisted to the 10. We communicated first with a borer's hole 6 ft. deep; it will take a week to square the ground, then I shall be able to report on the two lodes.

EAST WHEAL ROSE.—W. Skewis, T. Dodge, June 4: Penrose Engine-Shaft: The 22-in. plunger bottom is all down and fixed. The left side will be reared up and main rods with their connections and balance-bob will be put in their places as quickly as possible, and the draining below proceeded with. This being done the head of the engine will be much lightened for the time. Arrangements are made for the clearing of the 40 from this to Robert's shaft with as many men as can conveniently work at it, with a view to getting at the end on the east to the earliest moment, this being a point where we expect to find good lead ground to work on. There is no change to notice in the value of the stope on Innes's lode and the pitches on east lode.—North Wheal Rose: We have cleared the shaft 5 fms. below the 35. From this level there is a cross-cut put out from the shaft to intersect the lode; this is driven through hard country rock for 17 fms. So far it is that no timber has ever been put in to keep it open, neither is any required. This proves the firmness of the country rock around the shaft for that distance. Good progress has been made in the erection of the 100-in. engine with its boiler and steam-cylinder during the past fortnight, and the greater part of the woodwork for roof is fixed over the boiler-house. All the heavy parts of this vast and splendid machinery being fixed in their places, the lighter connections will be got together with much greater rapidity. We are pleased to say as far as the mine is drained it has turned out more lead than was expected; therefore, we consider the ultimate prospects and value of the mine when drained are increased by this fact. The greatest attention is directed towards the completion of the 100-in. engine at North Wheal Rose, so that draining and clearing of the mine to the bottom, and deepening the same, may be done as quickly as possible, in order that the best and most profitable results may be secured without delay.

GAWFON.—George Rowe, George Rowe, jun., June 2: There is no particular change in the mine since the statements and reports given on Wednesday last at the general meeting excepting 50 tons of arsenic soot prepared and partly delivered.

GLASGOW CARADON CONSOLS.—W. Taylor, W. J. Taylor, June 5: The shaftmen have nearly completed their bargin, sinking for bearers and cistern at the 114. We shall now fix lift there, and sink on below as fast as possible.

SOULSBY'S LODE: There is no change of importance at the 114 in driving east or in stope back of this level.—Harvey's Lode: The 114 west is being driven on the intermediate part of the lode; neither of the parts, north or south, have yet come into it, but which we expect further on. The part driven on is worth about 62 per fathom; the level east is worth 62 per fathom. The lode is getting more to its regular course, and we hope will so on improve. The 90 west, improved, is now worth from 62 to 102, per fathom. The 90 west-north lode is worth 102 to 122, per fathom. The stope throughout the mine are about the same value as last reported, from 62 to 142, per fathom. Our next sale of one is computed 170 tons, which will be sold at Truro on the 16th inst.

GOODEVERE.—R. Knott, June 6: Engine-Shaft: Since my report of last week we have put two men in the back of the 10, east from cross-cut, where the lode is 4 ft. wide, producing saving work for the stamps.—Higher Shaft: There is no change in the adit end east since last report. In the 10 east we have intersected a large cross-course, but as the men have not yet passed through it I cannot at present say whether it has the effect of shifting the lode or not. I will instruct you more fully as to this next week.

GREAT LAXEY.—F. Redcliffe, June 6: There is very little change to report in any part of the mine. The 239 end, driving north of Welsh shaft, is still worth about 122 per fathom, and the loadstuff of a kindly nature. The 217 end is quite poor at present, and has lately tapped a stream of water, which seems to be driving a coal-dustable section of ground northwards, possibly as far as Dumbell's shaft. The winze sinking in this level is worth 132, per fathom; one of the stope in roof has become too poor to continue, the other is worth 102, per fathom. In sinking engine-shaft below the 235 the line of the lode is still off that of the shaft, consequently the whole lode is not being carried in sinking. The present value of the portion seen is 132, per fathom for the length of shaft (12 ft.); but there is apparently more ore sanding. The lode in the 235 end south is of encouraging character, and worth 62, or so per fathom. The lode in this level north is worth 252, per fathom for the length of winze (9 ft.)—Dumbell's: This shaft is now drained of water, and we have this week resumed sinking from the point left off at 6 fms. below the 230. In the 230 end the lode is worth 202, per fathom. The two stope in roof of this level are worth 152, and 202, per fathom respectively. The winze sinking in the 215 is poor towards the bottom. The four stope in roof are worth 152, 182, 352, and 252, respectively. The 200 end is very changeable. In the past fortnight there has been a short bunch of 2 fms. in length, worth 182, per fathom; but in the present end there is again a "dead dip." I think we shall have another run of ore in the 155 shortly. The other points are without alteration.

GREAT WEST CHIVERTON.—J. Curtis, June 7: The new lift is fixed, and working well. We commenced yesterday to sink the engine shaft for the 20 fm. level, and hope to reach it within three months from this time.

GREEN HURTH.—J. Polglase, May 31: The north end (44) is worth 3 tons per fm. The 44 south is poor for ore, but plenty of water. The stope in the back of the 44 is worth 3½ tons per fm. No. 1 winze, below Standage level, is worth 1½ tons per fm.; the vein has become small at this point, but will probably improve shortly. In No. 2 winze the water hinders us from prosecuting this lode at present end. The 30 west is worth 3 tons per fathom. There is no change in this level from Standage level; ground hard. The stope in back of Standage level is worth 3 tons per fathom. In the 30 west the lode is 2½ fms. above the floor of that drift.

HENSTRETH.—T. Richards, June 6: The engine-shaft is down below the 40 fm. level 7 fms. 1 ft., good progress continues to be made, and the ground is of a very favourable character. The 40 east by four men has been driven during the past week 4 ft.; total distance from the shaft to 13 fms. 1 ft. 6 in., the part of the lode being carried 4½ ft. wide, containing capel, quartz, arsenical-mundic, wolfram, peach, and prian, and a little rich yellow copper ore intermixed, and is altogether in its general character very promising.

KILLIFRETH.—J. Mitchell, J. Tamlyn, June 7: Engine-Shaft: Our summen are busily engaged in cutting ground and taking up water at the 7, and preparing to put the 80 fm. level bucket-lift to work, while we expect to do this evening. The lode in the 70 end east is 3 ft. wide, with a very kindly appearance. In this level west the lode at present is split in two parts. In the 50 end west the lode is worth 302, per fathom; a stope in the back just behind is worth 154, per fathom. The lode in this level driving east is a little improved; worth 62, per fathom. Two stope in the back of this level are worth 102, per fathom each. The lode in the 50 end east is a little disordered. Two stope in the back are worth 202, and 172, per fathom respectively. The lode in the 20 driving west the lode is 4 ft. wide, but at present of no value. The winze sinking below this level east of shaft is worth 274, per fathom. Two stope in the back, east of cross-course, are worth 102, and 52, per fathom respectively. One stope in the back, west of cross-course, is worth 202, per fathom.

KIFT HILL GREAT CONSOLS.—Isaac Richards, June 7: At the tunnel level the 40 fm. level west fms. 1 ft., good progress continues to be made, and the ground continues of granite of a very clear and compact nature; 1 fm. 5 ft. has been driven during the past week. In the

POLREBO.—W. H. Martin, June 7: The tribute pitch at the back of the 17 has developed another lode standing to the north. A cross-cut at the 17 is to be extended, in the expectation of opening another section of tin ground.

POLROSE.—W. Bennett, June 4: I beg to hand you the following report for the general meeting.—We forked the water from the bottom of the mine a month after the last meeting, taking a little longer than was anticipated through some trouble we had with the valves of the bottom plunger. We found the 112 east run together, and this level and the bottom of the shaft took a considerable time to secure; there is a branch of flockan, &c., 9 ft. south of the lode, opposite the shaft, but which forms a junction with the lode in the 112 east 4 fms. east of the shaft; the ground between this branch and the lode being loose caused the run referred to. This branch lets down a lot of water, and it was this that the men pricked into last October when the water rose in the mine. Since the water has been out besides securing the ground at the bottom of the mine, cutting plat at the 112, and putting in penthouse for sinking below that level; we have driven the 112 east 2 fms. 4 ft., making it now 5 fms. 2 ft. from the shaft. For the first 3 fms. the lode was worth for tin 8d. per fathom, when it became full of mud, after which it did not look so well for tin. The lode in the present end is 2 ft. wide of flockan, peat, and mud, and a little tin, but not enough to value. I have suspended this end in order to put all the men in the shaft for the time. We have also sunk the engine-shaft 2 fms. below the 112. In the eastern end of the shaft the lode is 2½ ft. wide, a little smaller in the western end, composed of peat, spar, mud, and a little tin throughout. It is not, at present, producing so much tin as when we commenced to sink below the 112, but it is of a very promising character, and I like the channel of ground in which we are sinking. In the last 3 fms. we have cut another branch of peat and mud, with tin, south of the lode. It has regular walls, and in the western end is fully 1 ft. wide; this will fall into the lode a few fathoms deeper. For the coming quarter I recommend sinking the shaft with all speed, and driving the 112 east and west on the lode; the 112 east must be held with the winze below the 100 for ventilation. As the water has fallen off I think we can sink to the 122 before the next meeting. Seeing the quantity of mud we have at our present depth there is no mire but who would expect the lode to become productive for tin.

PORT NIGEL.—J. Mitchell, June 7: The men in the 95 have driven 2 fms. from each end of the shaft, and are now engaged cutting the plat. In the west end we have had some stones of blende. There is also a branch of lead in the end which we have had some fine stones of very pure lead; the lode in this end is of a very promising appearance. In the east end we have not yet cut into the lode, but will do so when we are ready to commence driving again. In the 80 west we have a branch of lead, saving work; it is in some places 2 in. big, and from the appearance of the lode, which contains blende and spar, and looks very kindly, I think the lode will soon increase in quantity; it has been driven 1 fm. 4 ft. this week. In the 80 east the lode continues very large, containing a little lead. The ground is a little harder, but still requires timber; it has been driven 8 ft. this week. In the 68 east there is no change since last report; it has been driven 4 ft. this week. The flow of water continues the same, and the engine is still going about 6½ strokes per minute.

PRINCE OF WALES.—S. Roberts, June 6: In the 102 west during the past week the men have been engaged cutting ground and laying tramroad, nothing being done in the ends. In the 102 east no lode yet taken down. In the cut-off north, in the 90 west, we have intersected the lode and cut in it over 6 ft., being composed principally of capel and spar, impregnated throughout with copper ore, but not as yet of any value. No change whatever in any other point of operation since last report.

ROMAN GRAVELS.—Arthur Waters and Son, June 7: With the exception that the lode in the 95 south has improved, being to-day worth quite 3 tons of lead ore per fathom, we see no change worthy of notice in any point in the mine since the date of our last week's report. We are making preparations for sinking a winze in the said level at a point 30 fms. behind present forebreak. We have to-day sold 500 tons of lead ore for 2517/10s.

RUSSELL UNITED.—John Bray, June 7: Last Saturday being our pay and setting, when we set Matthews' shaft to sink below the 90, by nine men, stent 10 fms. certain, at 17/10s. per fathom. The lode in this shaft is 4 ft. wide, producing a little copper and mud, of a very promising character. We have stopped all operations on the north lode for the time. Stephens' engine-shaft, to sink 2 fms., by nine men, at 23/ per fathom. At this depth we shall put in our plunger, which will do away with drawing-lift. This will be to our advantage in sinking.

SORTRIDGE.—Wm. Skewes, June 7: The clearing of the 40 cross-cut north to the Great North Tin lode is being got on with as fast as possible, and so is this level east on the tin lode. I hope to be in a position to report to you the value of the lode in my next. The next parcel of tin will be sent away for sale by the end of next week.

SOUTH CONDURROW.—W. Rich, W. Williams, H. King, June 6: We have suspended the driving of the 54, west of Marshall's shaft, for the time, and set the men to sink a winze below the level; the lode in this winze is worth 10d. per fathom, and the stopes in the back of this level is of such a character as can scarcely fail in producing copper ore in paying quantities at a deeper point.

WEST KITTY.—W. Vivian, June 7: In the 80, driving east, the lode is worth 10d. per fathom. In the 72, driving east, the lode is worth 12d. per fathom. In the stopes in the back of the 72 the lode is worth 12d. per fathom. In the 60, driving east of rise, the lode is worth 15d. per fathom. In the stopes in the back, west of the rise, the lode is worth 50d. per fathom. In the 72, driving west, the lode is about 2 ft. wide, producing a little tin, but not to value. In the 60, driving east of cross-cut, the lode is worth 20d. per fathom. In the rise in the back of the 60 the lode is worth 10d. per fathom. In No. 2 rise, in the back of the 60 fms. level, lode worth 9d. per fathom.

WEST VOR.—S. Harris, June 7: The lode in the adit level driving east of cross-cut is fully 4 ft. wide, from which I took and assayed samples that produced on an average 14 lbs. of tin per ton of stuff. It is a most promising lode at the depth, and it is being the only point that has been seen west of the great flockan makes it more important.

WEST WHEAL TOLGUS.—J. Gilbert, June 7: Richards' Shaft; The lode in the 105, west of shaft, is 5 ft. wide, composed of spar and stones of copper ore, and getting better defined, letting out a little more water, and presenting a promising appearance. In the winze in the bottom of this level the lode is still 6 ft. wide, and yielding 1½ ton of ore per fathom. No. 1 stope, in the bottom of this level, is yielding 2½ tons of ore per fathom, and No. 2 stope is yielding 4½ tons of ore per fathom. In the 85, west of shaft, the lode is 3 ft. wide, yielding stones of mud and copper ore, and looking kindly for an improvement, but the ground is very wet and spar for driving. The tribute pitches are yielding about their usual quantities of copper ore.

WHEAL CEBOR.—H. Phillips, P. D. Holman, June 5: The lode in the new shaft, sinking below the 132, is improving, being 10 in. wide in the east end, composed of arsenical mud and good stones of copper ore. There is no change in the 132, east of No. 2 winze, or west, where we are stripping down the lode; these points will yield in the aggregate 18 tons of good quality copper ore per fathom. The stope in bottom of the 120, east of winze, will yield 14 tons of good one per fathom. We have intersected a small branch in the 108 cross-cut, driving north towards the Bridge lode, which is taking an oblique course, with an underlie of 4 ft. in 6, composed of arsenical mud and copper ore; this we consider to be a good indication, as it may be a feeder or dropper into the Bridge lode, which is a south underlie. The stope in back of the 108 will yield 3 tons of ore and 2 tons of mud per fathom. The stope in back of the 45, east of new shaft, will yield 2 tons of ore and 2 tons of mud per fathom. There is no change in any other part of the mine.

WHEAL CEBOR.—W. R. Rutter, Boskern, June 6 (Special Report).—New shaft is sunk 11 fms. under the 132, the lode for the last 6 ft. sinking is 2 ft. in width, and contains good stones of copper ore and mud. In sinking the first 10 fms. the lode was poor and produced no mineral to speak of. The 132 has been driven west about 50 fms., at a point 30 fms. west from shaft. The lode for 5 fms. in extent was worth 6d. per fathom for copper ore, but throughout the rest of the driving as well as in the present end the lode is unproductive. The 132 has been driven east from the shaft 40 fms. The lode here was unproductive until within 4 fms. of the present end when it suddenly changed into one of considerable value. In the end the lode is now worth 5 tons of 10 per cent. copper ore per fathom. In the stope directly behind the end the lode is also worth 3 tons of 10 per cent. ore per fathom. In the 120, and 30 fms. east from shaft, a winze has been sunk in a rich lode of copper ore varying in value from 10 to 15 tons per fathom, the stope in the eastern end of this winze is worth 15 tons of 9 per cent. copper ore per fathom. The 108 has been extended 110 fms. east from shaft on the north part, lode poor for the whole distance; the south part of the lode, however, has produced considerable quantities of copper ore and mud for several lathoms in extent. There is one stope in the back of this level worth for copper and mud 8d. per fathom. In the 109, 190 fms. west from shaft, a cross-cut is being driven north with the object of intersecting the Bridge lode, which has been successfully worked in in the British United Mine. The 72 and 45 are being extended east towards the Old Crowndale Mine with the view of discovering copper ore in that direction. There is one stope in the back of the 43, east of shaft, worth 2 tons of copper ore per fathom. In referring again to the improved character of the lode which has lately taken place in the 132 end, east of the new shaft, I consider it to be a valuable and important discovery, and from which, I think, the returns of ore might be increased almost immediately.

WHEAL DARREN.—Henry James, June 7: We have a strong lode in the 130 east, but it is not quite so rich for lead as when last valued; worth at present 10d. per fathom of silver-lead ore per fathom. The lode in this shaft is 4 ft. wide, producing a little copper and mud, of a very promising character indeed; worth 14d. per fathom. We are not quite certain we have the main hanging-wall; shall, therefore, in the course of a few days put the men to drive south for proof of same; the lode is looking equally as well or better than it has since passing the cross-course, and I have no doubt, seeing its size and character, but what we shall find it quite as good as west of the above. This end is not quite far enough east to allow us to commence the rise against Martin's shaft, but directly we are able we shall put four men to rise, that a communication may be made with the above as soon as possible. The stope in the back of this level are worth respectively—No. 1, 7d.; No. 2, 6d.; Nos. 3 and 4, 6d. per fathom. In the stope in the back of the 110 west the lode is 5 ft. wide; worth 8d. per fathom. Martin's Shaft: We hope to complete the lode above to the 109 by the end of next week, when we shall at once put the men to sink below this level, that a communication may be made with the 110 with as little delay as possible. The lode in the adit level, west of old sump shaft, is without any particular change since last reported on. There is no particular change in the appearance of the killas driving by the side of the lode in the 70, west of old sump shaft, since last week; still find strings of mud and good copper ore in the killas. We shall drive on at present for another week, when the lode shall be taken down. The carpenter has completed all the necessary work for hauling at this shaft; this would have been finished before, but his having been called away about other work.

SOUTH PENSTRUTHAL.—S. Davey, June 7: Walton's engine-shaft is sunk to the 100, where we shall at once commence cutting plat, and, as soon as practicable, cross-cut to the lode. In the flat rod shaft sinking below the 130 we have met with another branch bearing mud and copper. From the porous nature of the branch sinking is somewhat retarded. On the whole prospects are encouraging.

TAMAL SILVER LEAD AND FLUOR-SPAR.—R. Goldsworthy, June 7: The lode in the 57 south is 3 ft. wide, producing about 2 tons 10 cwt. of fluor-spar per fathom, and occasionally good stones of silver-lead; a very promising lode.

The lode in the 27 is 2 ft. wide, composed of congenial capel, spar, mud, bende, and stones of silver-lead, and promising for further improvement. We have started a cross-cut from the new shaft, at the bottom of the downright there, to intersect the lode, which we hope to accomplish in three weeks.

TANKERVILLE GREAT CONSOLS.—Arthur Waters and Sons, June 7: Bog Mine: We are now driving out east and west from engine-shaft—with a view of more speedily draining the ore ground—at a point 11 fms. below the 175. We have driven 1 fm. 4 ft. east from the shaft, and the bulk of the water is coming out of the forebreak here; lode 6 ft. wide, and producing good stones of lead ore. We can now only see water in the most westerly (i.e., No. 15) pit, and it is to day 28 ft. below the 175, the greatest depth hitherto. The drivage west of shaft is 1 fm. 3 ft. in a lode 6 ft. wide in hard ground. We have every reason to believe that the water will be cut down effectively very shortly. No. 12 sump is 3 tons per fathom. No. 13 pit, west of ditto, down 4 fms., 2 ft. in a lode worth 2 tons per fathom. No. 14 pit, west of ditto, down 4 fms., in a lode worth about 2 tons per fathom. No. 15 pit ditto, down 4 fms., 4 ft. in a lode worth 5 tons per fathom. Pit on middle lode, west of engine-shaft, is down 2 fms., 1 ft., and worth 1½ ton per fathom. The 175, east of junction, on south lode, shows a promising lode, and is producing some nice stones of lead ore. There are 10 tribute pitches at work by 22 men, which are together worth about 2 tons of lead ore and 3 tons of blende per fathom.

PENNERLEY.—Warm Water Vein: The stope in the back of the 120 west, is worth from 35 to 40 cwt., lead ore per fm. The stope in the back of the 80 west, is worth, in the roof, quite 3 tons of lead ore per fm. We have now every reason to believe that this bunch of ore will continue up to and even above the 70. The new shaft is being sunk at a very fair speed, and the lode maintains its usual value throughout. The stope in the 80, going west from this shaft, is worth 3 tons per fathom. All other points here are looking quite as well as they have been for some long time past.—Tribute Department: No. 1 pitch in the back of the 40 west, on Big Ore, is worth 1½ ton per fathom. No. 2 pitch, ditto, is worth 3½ ton per fathom. Pitch in the 20 east, on Warm Water lode, is worth 1 ton per fathom.

POTTER'S PIT.—We are pushing on operations here as fast as possible. We can see into the large cavity, which is dipping west from bottom of new shaft below the 105, for a distance of 12 ft., and we are getting some fine solid stones of lead ore as we go down. The ore ground here for a length of about 14 fms. is worth in several places quite 2 tons per fathom in loose ground.

TANKERVILLE.—Tribute Department: Main Lode: Pitch in bottom of 220 west by four men, at 5d. per ton; worth 1½ ton per fathom. Pitch in back of 220 east on north lode by nine men, at 6d. per ton; worth 1½ ton per fathom; pitch in back of 192 west by ten men, at 6d. per ton; worth 1½ ton per fathom. The lode in the 212 east on main lode is 4½ ft. wide; worth 25 cwt. per fathom. We are delivering our last sale of lead ore and blende from these mines as fast as the carriers can take it.

TEBARTHWA.—W. Skewes, June 7: The lode in the engine-shaft is 3 ft. wide, well defined, composed of strong capel, quartz, and good work for tin. The sinking of the shaft is still being pressed forward with all speed. The stamps are fixed on the horses, and some of the framework is in its place, and every

effort is being made to complete this work so as to be in a position to stamp the tinstuff as quickly as we can. No lode has been taken down in the adit west since the last report.

TREGEMBO.—E. Chegwin, May 6: In the 16, east of cross-cut, the lode is 4½ ft. wide, worth for tin and copper ore 20d. per fm. In the 15, west of cross-cut, the lode is 2½ ft. wide, worth for tin 12d. per fm. In the winze sinking below adit level, 25 fms. west of cross-cut to engine-shaft, lode is 5 ft. wide, worth for tin and copper ore 25d. per fm. In the adit end, driving east of Pinnick's shaft on Tregembo lode, the lode is 4 ft. wide, worth for tin 10d. per fathom. We are clearing Derrick shaft below the adit level; when cleared will commence sinking with all speed. The balance-bob, pit-work, &c., at Pinnick's shaft, is in a forward state, and hope to have the same completed in a few days. The calciner, flues, round bubbles, and the stamp floors will be sufficiently advanced as to commence dressing tin by the middle of next week.

WEST CARADON.—N. Richards, June 6: A rise and stope in the back of the 38 fm., level on Vivian's north lode will yield 2½ tons of copper ore per fathom. A stope in the back of this level on Taylor's lode will yield 1 ton of copper ore per fathom. Gilpin's lode at this level will yield from 1 to 1½ ton of copper ore per fathom. A rise and two stopes in the back of the adit level on this lode will yield from 4 to 4½ tons of copper ore per fathom. This lode at this level driving west of Hallett's cross-course is slightly improved in appearance, yielding fully 1 ton of copper ore per fathom. There is no other change to notice throughout the mine since the report for the general meeting.

WEST CEBOR.—J. Andrews, June 6: The lode at the engine-shaft, sinking below the 62, is 4 ft. wide, composed of quartz, capel, mud, and some good quality yellow copper ore. We commenced to take down the lode in the 62 west on Monday afternoon, and so far as taken down it is 4 ft. wide, composed principally of quartz, capel, mud, and good stones of copper ore. The lode in the 62 east is 1 ft. wide, yielding a little copper and mud, but nothing to value.

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the Glasgow North-Western Bill Highland went up from 92 to 101, from which it afterwards fell about 3. Arizonas have fallen very heavily since the meeting of shareholders last week. In oil shares, Midlothian have commanded a good deal of attention, and have been bought at enhanced quotations. Since Wednesday last week North British have risen from 98½ to 100½; Edinburgh and Glasgow from 37½ to 37½; Great North from 54½ to 56½; Brighton Deferred from 102½ to 108½; Arizona have gone from 94s. 6d. 5½s.; Mason and Barry from 14½ to 15½; Tharsis from 12s. to 13s.; Mid-loft in Oil from 91½ to 105½; Uphill from 9½ to 10½; Young's Paraffin from 15½ to 11. Bank of Scotland has changed from 305 to 306; British Linen from 302 to 302; National from 305 to 308; Clydesdale from 24½ to 24. Edinburgh Tramways are 2s. 6d. better, at 10½.

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BARYTES
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ASHES, TERNE ASHES, AND ALL REFUSE CON-
TAINING TIN AND LEAD.

HENRY WIGGIN AND CO.,

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NICKEL AND COBALT REFINERS,
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The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, JUNE 8, 1883.

	IRON.	£ s. d.	£ s. d.	TIN.	£ s. d.	£ s. d.
Pig, Smelting, f.o.b., Clyde...	2 7 0	—	—	English, ingot, f.o.b.	99 0 0	—
Scotch, all No. 1 ...	2 7 9	2 8 0	—	" bars "	100 0 0	—
Bars Welsh, f.o.b., Wales	5 7 6	—	—	" refined "	101 0 3	—
" in London	5 17 6	—	—	Australian	94 0 0	—
" Stafford.	7 0 0	—	—	Bancs — nom.	—	—
" in Tyne or Tees	5 15 0	—	—	Straits 94 0 0	—	—
Swedish, London...	8 15 0	9 5 0	—	COPPER.	—	—
Hails, Welsh, at works...	5 7 6	—	—	Tough cake and ingot.	68 0 0	68 10
Sheets, Staff., in London	8 0 0	8 10 0	—	Best selected	69 10 0	70 10 0
Plates, ship, in London	8 5 0	8 10 0	—	Sheets and sheathing.	74 0 0	75 0
Hoops, Staff.,	7 10 0	—	—	Flat Bottoms	77 0 0	78 0
Nail rods, Staff., in Lon.	6 15 0	7 0 0	—	Wallaroo	69 0 0	70 0
STEEL.	—	—	—	Burns, or P.C.C.	68 10 0	—
English spring	12 0 0	18 0 0	—	Other brands ... nom.	65 10 0	66 10 0
cast	30 0	45 0	0 0	Chili bars, g.o.b.	64 2 6	64 5 0
Swedish, keg	15 0	0	—	QUICKSILVER.	—	—
" frag. ham.	15 10 0	—	—	Flasks, 75 lbs., war.	5 10 0	—
Rails at works.	4 15 0	5 0 0	—	PHOSPHOR BRONZE.	—	—
" Light, at works... 6 10 0	—	—	Alloys I., II., III., and IV.	£122 0 0	—	
LEAD.	—	—	—	" VI. and VII.	138 0 0	—
English, pig, common.	12 15 0	13 0 0	—	" XI. Sp. bearing metal 114 0 0	—	—
" L.B.	12 17 6	13 2 6	—	BRASS.	—	—
" W.H.	13 2 6	13 7 6	—	Wire.	7½d. —	—
sheet and bar.	13 12 6	13 15 0	—	Tubes.	9½d. —	—
pipe	14 0	0	—	Sheets.	7½d. —	—
red	16 0	0	—	" 2nd quality	0 16 9	0 17 0
white	20 10 0	22 0 0	—	" 3rd quality	0 16 0	—
" patent shot	16 0	0	—	Yel. met. sheath. & sheets 6 6½	—	—
SHIEL.	—	—	—	TIN-PLATES.* per box.	—	—
Metel per cwt.	—	—	—	Charcoal, 1st quality.	1 1 0	1 2 0
Ore 10 percent, per ton.	—	—	—	2nd quality.	0 19 6	1 0 0
SPULTER.	—	—	—	Coke, 1st quality.	0 16 9	0 17 0
Silesian, ordinary brands 15 0	—	—	—	2nd quality.	0 16 0	—
special brands. 15 5 0 15 7 6	—	—	Black.	15 10 0	—	
English Swansen.	16 5 0	—	—	Canada, Staff., or Gla.	12 0 0	—
Chest sine.	19 0 0 19 5 0	—	—	At Liverpool.	—	—
At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; 1X 6s. per box more than 1C quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.	—	—	Black Taggers, 450 ft.	30 0 0	—	

REMARKS.—The state of the Metal Market continues in an unsatisfactory condition, and the position of affairs just now appears rather critical. There is an absence of any animation in the home trade, there is a smallness in the transactions carried through with the Continent, Indian business is lifeless, with America there is next to nothing doing, trade at the Cape is almost at a standstill, and although Australia may form a slight exception, yet even from there advices are not very flourishing. It is not unnatural that our markets at home should show at times a good deal of depression, nor surprising that speculators, ever ready to do their part in endeavouring to raise trade from a condition of despondency to one of briskness, should constantly show a good deal of hesitation, ere they continue purchasing, finding that regular buyers do not follow up any rise that their action may cause. There may be a few features which tend to implant a certain amount of confidence, but they are comparatively small and insignificant when taken side by side with the features to which we have made reference above. For instance, there is cheap money, bright and cheerful weather, and agricultural prospects reported fair—these are points of a more or less favourable character—they are coincidences which tend to give a certain amount of support to the markets, and especially in those cases where recent statistics have testified to the reduced public stocks. Prices do derive a small amount of firmness from these, and a few other circumstances of a propitious nature, but against them stands out prominently great inactivity in general trade, and which has a depressing influence upon the sundry markets.

It might be argued, however, that where statistics have recently shown a diminution in public stocks that those metals at least do not share in the general quietude, that if the deliveries have exceeded the supplies that that is sufficient reason to justify the quoting of higher prices, but it is not so, as may be seen from an insight into the present state of general business—for instance, the stocks which statistics show are made up entirely of the raw material. Manufacturers then may and probably have been buying thinking that as speculation was working itself into some of the markets there might possibly be a speedy, though probably only a temporary, rise in prices, and as prices were low they thought it advisable to anticipate their coming requirements, but if trade is as bad as it is represented then it is difficult to see where the outlet can be for the sale of manufactured, and consequently if manufacturers have over estimated their wants, and have been obliged to lay up private stocks, the prospects of forthcoming statistics do not appear very bright, and if supplies are maintained at their usual average then the appearance of the markets may very soon be reversed, and the markets at once divested of the little extra support they have received therefrom. It will require a repetition of favourable statistics ere from this cause any permanent improvement can be effected, and until trade revives—that is, until there is a thorough restoration of trade from its present lifeless and inanimate condition—statistics are not only unlikely to show any improvement but following returns will doubtless show that deliveries have been kept under supplies, and stocks in consequence augmented.

COPPER.—The course of this market is still attended with a considerable amount of uncertainty; prices for Chili bars continue to fluctuate, and for other sorts of copper the quotations given are purely of a nominal character. At the opening of the week the market was very steady, and the holders appeared very undecided whether to sell or not; but finding buyers did not come up to the general quotations, prices became easy. Nevertheless, sales kept difficult to effect, especially for forward prompts. Yesterday, however, there was a favourable turn in the market: buying became somewhat more spirited, chiefly for sharp cash prompts, and prices recovered. The shyness evinced to buy for forward delivery, except at proportionately low prices, is a feature which indicates that there is no great amount of confidence existing in the continued stability of the market; and if such is the general view entertained, then it naturally follows that if prices should advance there will in all probability be a good deal of pressure to make sales, as operators would then doubtless consider it advisable to take any profits that might be offering, though they be only small, rather than run the risk of an uncertain and doubtful market. Irrespective of speculation, there is one feature which gives strength to the market, and that is the reduced public stock, which on the 21st ult. was 47,729 tons, against 49,961 tons at the end of the previous month, or a decrease of 2332 tons. These are figures so satisfactory that in a measure they justify the recent spurt, but then, consumers having probably fully satisfied their wants, and trade being extremely dull, it does not seem likely that the deliveries will continue so favourable, and in consequence stocks might again accumulate, and the support which prices derive therefrom would be withdrawn. In making a comparison with the similar period of last year, it is worthy of note that in May, 1882, as in May, 1883, the public stock was greatly reduced, while in the following month last year stocks were again increased, and it now remains to be seen whether there will be a similar increase this month.

IRON.—This market may still be reported as in a semi-stagnant condition, and in prices of most descriptions there is a good deal of

steadiness, though, taken on the whole, an easy tendency prevails. From certain parts of the country a rather better feeling is reported to prevail; but more in the tone than in the actual business doing. Transactions for all classes of iron are limited not merely as regards the number of orders that are being placed, but also as regards their magnitude. Buyers limit their purchases as much as practicable, and, for the most part, refuse to buy beyond most pressing requirements, and as yet not even the low prices induce them to alter their long and continued policy of purchasing merely from hand to mouth. The markets, for both manufactured and the raw material, are in an equally bad state, and what adds to the depression is the entire absence of speculative buying. From day to day and week to week the market is kept divested of all vitality, and speculators can observe nothing in the immediate prospects to warrant the making of purchases. There is nothing to show that supplies are likely to be curtailed; nothing to indicate that the genuine demand will shortly be stimulated, and, therefore, there is practically no encouragement to tempt operators into the iron market. Other investments have a more favourable prospect, and, in consequence, iron suffers. It is true that the heavy public stocks are constantly being reduced, but they are still large and burdensome to the market, and, if private stocks do not decrease as well as public, there is no satisfactory or strong support afforded the market.

While prices generally have not undergone much alteration, there is in makers' iron a decided reduction in the quotations for the higher priced brands, and very little business is being transacted. The advices from Glasgow show that at the opening of the present week there was a good business done in warrants between 46s. 9¾d. and 46s. 8½d., while on Tuesday there was further animation in the market, and the price advanced from 46s. 8½d. to 46s. 11½d., closing with sellers at the best point. On Wednesday the market was quiet again, and there was only a moderate business done between 46s. 9d. and 46s. 8½d., but at the end of the day the tone again became a shade firmer. Yesterday the market was again stronger and has further advanced to-day, and closes at 47s. per ton. The shipments last week were 11,691 tons, against 9867 tons for the same week of last year, being an increase of 17 2 tons, and which makes the total shipments for the whole of this year 259,158 tons, against 259,977 tons for the same time of last year, and 225,344 tons for the period of 1881. The number of furnaces in blast remain at 117, and the public stock has been increased by 300 tons, and now amounts to 578,875 tons, against 578,575 tons last week. The imports of Middlesborough pig-iron into Grangemouth last week were 6730 tons, against 2414 tons for the similar week of last year, being an increase of 4316 tons, and which makes a total increase for the whole of this year, compared with last, of 12,638 tons.

The Cleveland market is said to show no improvement whatever, the tone keeping dull, and prices display a downward tendency, the large reduction that has been made in stocks during May failing to strengthen the tone. The depression in the market continues to be intensified by strike difficulties, and the low prices ruling upon the Scotch market. Shipments, however, continue very fair, those last week being above 21,000 tons, while during the whole of May they were nearly 88,000 tons. The present price for No. 3 is 39s. to 39s. 3d., at which there are many sellers, but makers' prices are 39s. 6d. to 40s., but no business is reported thereto. The demand for warrants is very inactive, and sellers are unable to realize 39s. for them. The public stock shows a reduction of 660 tons for the week. There is no change in prices for manufactured, and fresh enquiries are limited. The price of ship-plates is 62s. 2s. Ed.; of angles 52s. 12s. 6d.; of bars 52s. 17s. 6d.; and of puddled bars 72s. per ton. The report from Sheffield shows that in railway material there is not much doing, the demand for rails being dull. There is, nevertheless, a fair business doing in ship and boiler plates. The Wolverhampton market is reported to be rather stronger, sheets especially being somewhat dearer, doubles having advanced from 8s. to 8s. 6d. Roof and bridge iron is in fairly good request, but pigs meet with only little demand. Derbyshire qualities are quoted at 46s. 6d. per ton.

The report which comes from Birmingham shows that a healthier tone prevails upon that market, and transactions have been somewhat more numerous in common bars, sheets, and hoops, while quotations generally are slightly firmer, although it is very difficult to find buyers at any increased rates. Steel sheets are reported in brisk demand, and for Australia and South America there is a very fair enquiry for galvanised sheets. In pigs there is no alteration as regards prices, but some very good sales have been made although they have not been evenly distributed, being confined to only a few makers. There is no change in the state of trade in Wales, but lately several good cargoes of iron have been shipped. Advices from New York of the 31st ult. state that the depression in the American market continues, and the quotations for Scotch pigs are nominally unchanged, but hematites and Cleveland pigs have been reduced in value. In scrap and old rails, on the other hand, there is some recovery owing to supplies running low.

TIN.—This week there has comparatively been but a small business doing in this metal, and prices have tended in favour of buyers. The attention of speculators has been diverted elsewhere, and therefore there has been an absence of activity, and the fluctuations that have been made in quotations have been only trivial. In the statistical position of the market there is no perceptible alteration, the total visible stock at the end of last month being practically the same as at the close of April, the totals given in the statistics being 16,423 tons against 16,417 tons; but the price on May 31 was 30s. below what it was on April 30, and it has since been further crumpling away. There is one feature, however, in the returns which, comparatively speaking, is not altogether satisfactory, and that is the deliveries which were made last month—1733 tons against 2113 tons in April. Nevertheless, the quantity is very fair, and if continued at the same figures may possibly tend to prevent the market from falling away to any very material extent.

It is also to be noted that the diminution is chiefly in Holland, not in London, showing that our consumers are still buying pretty freely. With regard to supplies statistics show they have been rather full, those last month from Straits to London having been 500 tons; from Australia 1200 tons; from Straits to America 275 tons, and from Australia to America 100 tons; making a total of 2075 tons, and to which has to be added 385 tons sent from London and Holland to America. The stock of Banca in Trading Company's hands and abroad is estimated at 3387 tons.

SPULTER.—The tendency of this market is a little weaker, but we still call ordinaries 15s., and specials 15s. 5s. to 15s. 7s. 6d. per ton.

LEAD.—This market is very quiet. Spanish is obtainable, both spot and forward, at 12s. 10s., and there are buyers at 2s. 6d. per ton. English is quoted at 12s. 15s. to 13s. 7s. per ton.

STEEL.—There is but little change, there being but a moderate demand at previous prices.

TIN-PLATES.—A fair business is doing, and prices, although without quotable change, are nevertheless a shade stronger.

QUICKSILVER.—The Board of Trade Returns for May are:—

	1881.	1882.</
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revenue, in which the shareholders in both the existing companies will equally participate after the amalgamation. There can be no doubt that the amalgamation will be advantageous to the shareholders in both concerns, since by concentrating the management of both mines and railway under one head, great economies may be effected, and other conditions established more favourable for the development of the property than those at present existing.

The Hammer Portland Cement, Coal, and Coke Company has been formed, with a capital of £30,000, in shares of £1 each, to purchase for £4,000, (of which £2,000 is taken in fully-paid shares, and £2,000 in cash) and carry on the business of portland cement manufacturers, including the working of the hydraulic limestone quarries and kilns at Trelogan, Flintshire, and the acquiring of the Hammer Colliery. The prospectus states that the cement works are conveniently located immediately adjoining the colliery, with the advantage of extensive siding accommodation in connection with the London and North-Western Railways as well as direct shipment from the company's private wharf and staiths. The late Mr. Henry Boil, C.E., the author of "Portland Cement: its Manufacture and Uses," and a "Practical Treatise on Concrete," recently visited and inspected the properties, and in his report, dated Feb. 23, states that he has not in his experience seen quarries with such a large proportion of first-rate stone suitable for the manufacture of portland cement. It is added that fuel being the chief item of cost in the manufacture of portland cement, it is obvious that works within a few yards of a plentiful supply of cheap and excellent coal and coke possess advantages which would enable them to enter into successful competition with any existing cement works. The cost of the company's cement delivered at Liverpool or Barrow, according to Mr. Reid's report, would be 2s. per ton. The present selling price at these places is about 4s. per ton, thus leaving a margin of 1s. per ton. The Hammer Colliery, at Englefield, in Flintshire, is described as comprising about 300 acres, or nearly 5 square miles in extent, and is held under lease from Lord Hammer, of which 37 years are unexpired, the conditions being of an exceptionally favourable kind. The directors are advised by competent authorities that, taking all the advantages of the colliery into consideration, upon an output of 3,000 tons per day the sum of £300,000 should be realised as profit, and that within a period of 12 months the sale can be increased to 4,000 tons a day, yielding an annual revenue of £750,000. The colliery has been inspected and favourably reported on by Messrs. R. N. Boyd, Jacob Higson, of Manchester, and A. Thomas, of the Forest of Dean. It is estimated that profits of at least £12,000 per annum will be realised.

Struthers' Patent Diamond Rock Pulveriser Company is in course of formation with a capital of £120,000, in shares of £1 each, to purchase (but the amount of purchase-money is not mentioned in the notes forwarded) the patents for Great Britain and the Cape Colony of Struthers' Diamond Rock Pulveriser, as well as all future improvements upon the same of the patentees, inclusive of the first and only machine which has been manufactured, and which is already in successful operation at Kimberley, South Africa. The advantages claimed are that the Diamond Ore as it comes from the mine, instead of being exposed on the floors, will be put directly through the machine, and the diamonds separated in one continuous operation, that no opportunity occurs for handling the ore during the process of treatment, that a saving of time to the extent of several months will be effected in treating the ore; and that the cost of treating the ore will be reduced by more than one-half. One machine is capable of treating over 500 loads of ore per day. It is explained that the ore, or blue rock, from which the diamonds are taken is a hard clayish substance, called by the diggers blue ground. It requires first to be blasted, and it is then taken from the mine in large pieces and spread on the floors, where it is exposed to the action of the atmosphere, which is a long and very tedious process, taking, according to the nature of the ore and the humidity of the air, from two to nine months to dry before being in a fit state for treating. In addition to the great loss of time thus incurred, a large proportion of the diamonds are stolen, it being a well-ascertained fact that the loss from this cause amounts to nearly one-half of the diamonds obtained, or to over 2,000,000.

Devon Great Consols, 4 to 4½; the monthly sampling of copper ore is 866 tons. In several levels the drivages on the course of the levels present improved appearance for meeting with some good discoveries of copper and manganic ores.

Devon Great United, 4 to 3½; and enquired for, owing no doubt to the improvement in the 60 and 70; also in driving the 120 both east and west, from the appearance of which some good discoveries of ore are anticipated.

Drakewalls United, 4 to 3½; good progress is now being made in pumping out the water at the engine-shaft below the adit level.

Kit Hill Consols, 4 to 3½; the agents report that a fine lode has been opened into, containing some good quality tin ore at the 75 west, where the lode is from 5 to 6 ft. wide. The tunnel level during the past week has been driven about 2 fms.

South Devon United, 4 to 3½; the lode in the 110 east continues to be worth 14½ per fathom. The agent thinks there may be other lodes standing by the side of this level, and will cut in to prove the same. The adit and 70, on old lode, looks promising for improvement at an early date.

Wheal Pevor, 3½ to 4½; the prospects here have considerably improved of late, both for tin and copper, but more especially for copper on the Great North Downs lode. This lode yielded copper which realised upwards of £60,000, immediately to the east of the present workings in Wheal Pevor, and judging from indications there is every reason to expect a profitable lode will soon be met with in the new shaft. It is stated they have between 300 and 400 fms. of entirely unexplored ground on this lode.

Richmond, 7 to 7½; the week's run was \$15,000 from 240 tons of ore with one furnace. During the week the refinery produced doré bars to the value of \$24,000. The superintendent's weekly report on the present condition and advance of the prospecting and dead work for the week ended May 14 states that the 300 south-west drift from south-east has been run 15 ft. Total 195 ft. In limestone stained with iron. The 1050 north-west drift from above has been run 21 ft. on fissure in limestone. Commencing at a point 624 ft. from station. The 1050 north-east drift from north-west drift has been temporarily stopped.

Ruby and Dunderberg, 1 to 1½; the weekly report advises good shipments of ore from the Home Ticket and Dunderberg on tribute. The usual telegram received on Tuesday is considered very satisfactory, as 100 tons of ore sold for smelting realised nett cash \$24·36 per ton, which is fully equal to an assay of \$50 per ton. A good profit should, it is said, be made in this quality of ore.

California Gold, 1 1½ to 1 3½; the mill run this week was 305 tons; yield, 840t. Smelting ore sales, 280t; total, 1120t. The shaft is reported to be sinking in good ore. The report states that the 1100 ft. level stopes east are yielding 10 tons of good grade milling and 1 ton of smelting ore per square fathom; and the 1250 stopes east 8 tons of milling and 1 ton of smelting ore per square fathom.

Kohinoor and Donaldson, 1 to 1 1½. The following telegram was received on Thursday from the resident director:—"Just sold 9 tons Donaldson ore for over \$1500 net."

In Lead Mine Shares, owing to the continued downward movement of lead, there is practically nothing doing. Roman Gravels, 8 to 8½. A sale of 300 tons of lead ore which took place on Thursday realised 2517·10s. There is little change in the various points of the mine. The lode in the 95 south has improved, and is worth 5 tons per fathom.

Tankerville Consols, 4 to 3½; better progress is being made in the forking of the water from the deeper levels in the various parts of the mine.

Some doubts having been expressed as to whether the Oregon and California Railroad Company would be entitled to the land grant south of Roseburg, owing to the line not being completed within the specified time, the following telegram from Mr. Villard, President of the company, satisfactorily settles the matter:—"Government has settled question land south Roseburg, favour company."

Advices have been received that the New York, Ontario, and Western line was opened on Monday via Middleton and the Cornwall extension of the West Shore Railway to New York.

At the Stock and Share Auction and Advance Company's sale, on Thursday, the prices among others obtained were:—Grosvenor Gallery Library, 15. 17s. 6d.; Army and Navy Hotel, 32. 5s.; National Syndicate Trust, 12. shares, 20s.; Isle of Man Trams, 17s. 6d.; Short Horn Dairy, 13s.; Junior Army and Navy Stores, 12s.; Ruby and Dunderberg, 1½.

His Excellency Musurush Pasha entertained the Earl and Countess of Dufferin and Lady Helen Blackwood, his Excellency Count Corti, his Excellency the Servian Minister, M. and Madame Catalani, Lord and Lady Arthur Hill, Hobart Pasha and Mrs. Hobart, Mr. and Mrs. Peader, and a select party at dinner, at the Turkish Embassy, Bryanston-square, on Thursday evening.

WILLIAM ELMORE (LIMITED).—A letter from Mr. Richard Morris, published in another column, and a communication from Mr. Elmore on the subject of a paragraph referring to the company, published in last week's Journal, sets right a matter in which the correspondent who supplied the figures appears to have been in error and premature. The directors are most anxious that the correction should be made; otherwise the statement might tend to mislead the public, and there can be no possible objection to give prominence to their wishes.

VICTORIA GOLD.—Good progress is, writes a correspondent, being made with the erection of the machinery, and it is expected that in the next advices it will be announced that a remittance of gold will be made at an early date. The results will probably agreeably

surprise shareholders and the investing public generally. The capital on which dividends have to be paid is comparatively small.

EAST BOTALLACK.

To erect more pumping power and develop the recent important discovery of Tin the Committee have determined to issue 500 Shares at 4s. premium—£1 per Share.

Application to be made at once to the Purser,

MR. JOHN HOLLOW,

East Botallack Mines, St. Just, Cornwall.

EAST BOTALLACK.—A very important improvement in the Balleswidden lode was reported last week. The shaft has been sunk 5 fms., and the last 3 far exceed anything yet seen in this young and promising concern. The agent sampled the stuff, which produced 1½ cwt. to the ton. This renders the recent discovery doubly important. It will be seen in an adjoining column the committee, in order to bring the mine into a paying one sooner, are issuing a few shares at 4s. prem. to erect more pumping power and develop the lode at greater speed.

WEST BASSET.—A good improvement has taken place here at the 124, west of Percy's shaft, where the lode is worth 50s. per fathom. The lode also at the North Frances part of the mine has also considerably improved.

NORTH BUSY.—The lode in the 22 has improved, now worth 1 ton of copper ore per fathom. The operations of opening up the lode in the new ground are said to be meeting with success beyond the most sanguine expectations.

LANGFORD.—The operations here are progressing satisfactorily. The engine-shaft is now down nearly 5 fathoms below the 50 in a beautiful lode of light spar and rich copper ore, which improves every foot opened. The junction of the celebrated Well silver lode with the copper lode is expected in a few fathoms sinking. Cross-cuts are being put out at the 10, 30, and 50 fm. levels to intersect in new and deeper ground four other silver lodes, which are within a distance of a few fathoms only of the engine-shaft, and from which have been extracted by the old workers over 300,000s. worth of silver ores. The prospects of this mine are considered brilliant, as a new deposit of silver may at any hour be opened.

OLATHE SILVER.—It is understood that recent discoveries in the Olathe placer have resulted in an offer from responsible persons in Leadville to work the company's property situate between Big and Little Evans' Creek, they finding all plant and machinery, paying all expenses, and giving to the company a royalty of 25 per cent. of all the ore obtained. The directors have accepted the offer, and a three years' lease has been executed, which was forwarded by the Alaska on the 2nd inst. The directors are advised, in a letter from a gentleman who has been long resident in Leadville, that "the lessees are responsible and experienced men." Mr. Searl, the company's agent at Leadville, writes under date May 20, 1883 (received 5th inst.), in reference to a report as to trespassers on the O. K. shaft (the O. K. shaft is within the limit of the company's patent):—"I find that the report I wrote you about the O. K. shipping mineral was correct. I understand they are taking out from \$500 to \$1000 a day, and that the parties are working under a lease from one Finerty; that they are leaving as much ore in sight as possible in the workings, hoping to sell it at big figures. Some one should have full authority to proceed against these parties and protect the rights of the company. I am confident, as I always have been, that there is much valuable mineral in the Olathe, but, like many other localities near the noted mines of Leadville, it is being found much easier and nearer the surface than was supposed that it existed, even by those who had the greatest confidence in the existence of mineral.

ORGANOS.—The company, writes a correspondent, was brought out under circumstances of a somewhat peculiar, yet satisfactory, nature, the capital being only 15,000s., and no payment being asked for the property by the vendors, who legitimately content themselves with a reasonable royalty on any gold that may be raised. A limited profit would therefore yield a comparatively handsome dividend, and the directors have high confidence in the prospects. Among other statements in the prospectus is the calculation that with an average produce of 3 oz. of gold dividends every year equal to more than the capital may be confidently looked for; this should satisfy all shareholders. The erection of the machinery has taken much longer than was anticipated, and been a source of disappointment to everyone. It is evident, however, that permanent crushing has now been commenced, and under these circumstances the preliminary crushings, amounting in all to 110 tons of quartz, yielding 157 ozs. of gold, or an average of about 1 oz. 8 dwt. per ton, must be taken as a most favourable augury of the future.

CONCENTRATING SULPHURIC ACID.

The concentration of sulphuric acid is now and has been almost exclusively carried on in retorts composed of either platinum or glass in various forms, for the reason that ordinary iron retorts were impracticable, owing to the fact that dilute sulphuric acid acts upon the iron, forming a sulphate which tends to a rapid destruction of the metal and an impure acid as a natural result. As between the platinum and the glass as desirable materials for retorts the former is the most satisfactory, but its great cost entails so serious an outlay that it has given to manufacturers having the means to employ it almost a monopoly of the manufacture of strong sulphuric acid.

Where glass retorts are used the results are to a considerable extent unsatisfactory because of the large amount of fuel required, the frequent breakages and consequent wear and tear, and in addition to the disadvantages named the employees are exposed to considerable danger.

The object of the invention of Mr. JUNIUS GRIDLEY, of Brooklyn, U.S., is the concentration of dilute sulphuric acid in cast-iron vessels in such a manner that the iron is not acted upon by the acid, thereby rendering iron vessels for that purpose as effective as platinum. The invention is based upon the fact that sulphuric acid of 66° Beaumé strength at 60° Fahr. has little or no action on cast-iron, and the invention consists, first, of the process of introducing a small stream of dilute acid from the evaporating pans of the strength (say) of 65° Beaumé into a large quantity (say) 1 ton or more, of acid of the strength of 66° Beaumé contained in a concentrating pan or retort charged originally with acid of 66° strength, and kept thereafter at the boiling point—the feed of dilute acid to be so regulated as not to reduce the acid in the concentrating pan or retort between 65° Beaumé at the surface or acid line, at a point and 4 in. below the surface the iron at the sides is protected from the action of the acid.

The second part of the invention consists of a cast-iron pan, cast with an inwardly projecting flange that supports the arch and ends. He prefers to make this pan about 4 ft. high, 8 ft. long, and 1 ft. in depth, with sides 1½ in. thick, and a bottom 1½ in. thick. At one corner of the pan he forms a pocket about 6 in. by 6 in., and depth of pan, the bottom of which latter is connected with said pocket. The arch that covers the pan he preferably constructs of fire-brick set in fire-clay, with a backing of asbestos retort cement between the bricks and the sides of the pan above the support of the arch. The ends of the latter are provided with feed and vapour pipes, the feed being effected by means of a syphon that delivers the liquid from an evaporating pan into a cup, and thence by a pipe into the pan.

WILLIAM ELMORE (LIMITED).—A letter from Mr. Richard Morris, published in another column, and a communication from Mr. Elmore on the subject of a paragraph referring to the company, published in last week's Journal, sets right a matter in which the correspondent who supplied the figures appears to have been in error and premature. The directors are most anxious that the correction should be made; otherwise the statement might tend to mislead the public, and there can be no possible objection to give prominence to their wishes.

VICTORIA GOLD.—Good progress is, writes a correspondent, being made with the erection of the machinery, and it is expected that in the next advices it will be announced that a remittance of gold will be made at an early date. The results will probably agreeably

The pan is heated by a suitable furnace underneath it and below the pocket is arranged a cooler. The pan is also provided with a pipe for carrying off the vapours. He draws off the concentrated acid from the pocket into the cooler by means of a syphon, from which pocket it is then taken to the bottling tank. As the pan would have a boiling surface of about 24 square feet, the heat that can be practically brought to bear upon it will concentrate from 7 to 10 tons of acid in 24 hours. To those skilled in the art of concentrating sulphuric acid it will be understood that the strongest acid is always at the bottom of the retort and the light acid at the surface, so that in practice the supporting flange will always be below the weak acid line, while the sides that would otherwise be exposed to the action of the weaker acid are protected by the fire-brick of the arch, and the asbestos retort cement, which is impervious to boiling acid when confined between surfaces.

EXHIBITIONS AS AIDS TO ENGINEERING PROGRESS.—At a meeting of the Society of Engineers, on Monday (Mr. Charles Gandon, Vice-President, in the chair), a paper was read by Mr. Samson Barnett, jun., on "the Value of Exhibitions as Aids to Engineering Progress." After pointing out that the amount of our exports in iron and machinery, and the number of patents taken out since the great Exhibition of 1851, had increased fivefold, it was evident that enterprises that stimulated and trained the intellect both of manufacturers and purchasers, were necessitated by the continual improvements and new processes of manufacture, and that the direct consultation of producers and consumers lessened the friction of business; important inventions were at once brought before those most interested in them; students could grasp what in many cases elaborate drawings and deep reading would not convey.

EXPLOSIVES ACT, 1875.—The Government have just issued through the Stationery Office, at the price of 1d. a Supplement to the Guide-book to the Explosives Act, 1875, containing the New Orders in Council, and Explanatory Memorandum, by Col. V. D. Majendie, C.B., Chief Inspector of Explosives. The pamphlet contains all the information any user or seller of explosives is likely to require.

BOILERS FOR HEATING APPARATUS.—Messrs. Robert Jenkins and Co., of the Masbro' Boiler Works, Rotherham, have just issued a neat little illustrated catalogue of wrought-iron and welded boilers for heating apparatus, which will be useful to those requiring such articles.

C. PASS AND SON, BRISTOL,

ARE BUYERS OF

LEAD ASHES, SULPHATE OF LEAD, LEAD SLAGS, ANTIMONIAL LEAD, COPPER MATTE, TIN ASHES, &c. and DROSS or ORES containing COPPER, LEAD, AND ANTIMONY.

GEO. G. BLACKWELL,

26, CHAPEL STREET, LIVERPOOL,

HANDLES

MANGANESE, BARYTES, SPARS, and ALL ORES on SALE or PURCHASE.

EDGAR JACKSON,

(Associate Royal School Mines),

ANALYST AND ASSAYER,

Assays or Complete Analyses made of Copper, Silver, Lead, Zinc, Tin, and other Ores. ASSAYING TAUGHT.

ROBERT C. FISHER AND SON,

GENERAL, CONSULTING, AND MINING ENGINEERS

SWANSEA

REPORT ON MINERAL PROPERTIES AND MINES, ADVISE ON ALL QUESTIONS OF THE WORKING AND MANAGEMENT OF MINES.

JOHN M. STUART,

CONSULTING MINING ENGINEER

ANALYST AND ASSAYER

OFFICE

11, QUEEN VICTORIA STREET, LONDON, E.C.

MESSRS. PENNINGTON AND CO., SWORN BROKERS AND SHARE DEALERS, 13, MOORGE STREET, LONDON, E.C., HAVE FOR SALE the following, per share net:—

25 Bratsberg,	100 East Wheal Rose,	50 Old Shepherd,

<tbl_r cells

NOTICES TO CORRESPONDENTS

BREATHING APPARATUS—"Student" (Manchester).—The use of "apparatus" as the plural of "apparatus" would display equal ignorance of Latin and of English. We do not know Forbes Martin as a philologist; you must, therefore, state the name of his book and the century in which he lived, as an opinion might then be formed as to whether he or Cicero is the better authority upon question of pure Latinity. Poor old Cicero supposed "apparatus" to belong to the fourth or u-declension, as we now term it, and wrote, singular and plural, "apparatus," but, of course, modern Manchester education may demand reliance upon a better authority than he in a subject so constantly changing as the Latin language in the nineteenth century; and, therefore, the acceptance of Forbes Martin's authority or that of some other writer in the dark ages to which he probably belongs. In English it is an inviolable rule either to use the original plural of an incorporated word, or to Anglicise the word altogether, and make the plural in "s" or "es." Unless you desire to be laughed at do not use the word "apparatus" in your paper, but "apparatus" or "apparatus" as the plural. The two last are both correct, but the first of them decidedly preferable.

TIN STANDARDS—"K. J." (Bradford).—The price of tin ores does not always closely follow the price of the metal in the London Market; in fact, it usually precedes, as the smelters are at least as well acquainted with prospects as other people. On May 5 there was a reduction of 2s. per ton all round, of course, making the prices 85/- for common, 90/- for superior common, and 92/- for refined. The so-called margin between the smelter and miner does not "indicate how much the smelter is grinding out of the miner," as the smelter has very often large stocks of ore—he will always buy at a price—which sometimes give the smelter larger, sometimes smaller, profits.

CORRESPONDENCE.—All communications in reply to letters published should, to ensure attention for the current week, reach the office not later than Thursday morning. We must again repeat that letters in the Correspondence columns can only be replied to through the same channel. All letters reaching the *Mining Journal* in reply are, however they may be addressed, or when in blank envelopes, opened; and the enclosure is published or destroyed at the discretion of the Editor, but never forwarded to the correspondent replied to.

OIE PURCHASERS—"B. A." (Cardiff).—The lists of purchasers of ores are from time to time published in the *Journal*. For platinum ores probably Johnson, Matthey, and Co. would be the best firm to apply to. Silver and silver-lead ores can be readily sold in Swansea. If "B. A." is not accustomed to sell ores his preferable course will be to place the matter in the hands of one of the Swansea brokers—Bath and Son, Richardson and Co., or others.

Received.—"Enquirer" (New Holbush and New Redmoor Mines)—"R. M." (William Elmore, Limited)—"B. A."—"H. C. H." Send your communication in English, but send also the original Norwegian, that any expression not clear may be corrected—"H. S." (Redhill): Answered by post—"E. T. M." (Exeter): All statements with regard to the price of and dealings in shares must appear as advertisements; they are not admissible as correspondence—"J. A. M.". Testimonials, especially seven years old, cannot be inserted in the correspondence columns—"T. A. R.". No doubt your best course—"Subscriber of 15 years" (Chill Gold): Should have sent his name; we cannot identify all correspondents by their handwriting alone—"H. O." (East Devon Consols): Enquiry of a broker; we never give opinions as to the value of shares—"Taurus Major" (Organos) and "A Contented Shareholder": Must advertise if they wish to buy or sell shares.

THE MINING JOURNAL,
Railway and Commercial Gazette.

LONDON, JUNE 9, 1883.

THE MINERAL TRAFFIC BY RAIL AND WATER.

The great Parliamentary railway battle of the Session is now taking place in the House of Commons Committee-room, and promises to be the most costly Bill of the kind introduced for several years past. The Bill is for a railway from Lincoln to Hull direct, and the fate of it is looked forward to with interest by the mineowners of Derbyshire and the West Riding, but from opposite points of view. For many years past the coalowners of Derbyshire have felt the want of a shipping port near their mines, and it is considered that were the Lincoln to Hull line made there would be no difficulty in obtaining powers to construct another connecting Derbyshire with Lincoln, giving direct access to Hull. A line from Derbyshire to Lincoln would pass through the extensive ironstone field of Frodingham, in North Lincolnshire, where there are some 20 furnaces in blast, so that a reciprocal trade could be established. But the direct line, from Lincoln to Hull would open out extensive fields of iron ore lately found lying quite close to the surface at Missingham, Scotton, and Kirton. These, if connected by rail with Hull, would become as important centres of industry, and open out valuable minerals on the Earl of YARBOUROUGH's estate. Much of the opposition is directed against the bridging of the Humber at Hessle, which, it is contended, would impede the navigation, and prejudice the interests of Goole. To it large quantities of coal are sent for shipment from West and South Yorkshire.

For years past it has shipped much coal for home ports, and recently has done a good foreign trade, large vessels taking cargoes for Cronstadt, the Cape, France, and elsewhere. Being nearer to the West Riding and to Leeds, Bradford, and Sheffield than either Hull or Grimsby, the rates are lower. Consequently, the West Riding miners and manufacturers are strongly opposed to anything that will interfere with the navigation between Hull and Goole. Goole is 20 miles nearer to Sheffield than Hull, and it is also much nearer to Bradford, Leeds, Pontefract, Wakefield, and Barnsley. It is, therefore, to the interest of those districts to prevent interference with Hull, especially as considerable expense has been incurred there in providing the best facilities for the shipments of goods and minerals.

On the other hand, the proposed line would shorten the journey considerably between Hull and London *via* Lincoln, and perhaps ultimately lead to Hull being connected with Derbyshire. The opposing interests are strong, and should the preamble be declared not proved the bridge over the Humber will turn out to be the principal cause. In the districts affected the result is awaited with keen interest, especially by those connected with coal and other mines.

LEAD MINES IN YORKSHIRE.

Just now not much is being done in lead mining in the North of England, but it is expected that before long things will look better. In Yorkshire the Arkengarthdale, Grassington, Old Gang, and Pateley Bridge Mines produced a good deal of lead, as some few do at the present time, and so at one time did the Cononley Mine, which, with Grassington, belonged to the Duke of Devonshire. At some of the mines the veins are peculiarly situate; at one place the principal vein is the result of an extensive fault, the actual "throw" not having been defined. In the southern portion of the lead district of Yorkshire organic remains are found in the veins of the carboniferous rocks. The main vein in the grit has produced large quantities of lead, going through strata where there has been considerable disturbance. A good many mines have been abandoned, but there is no reason why they should not be re-opened out in the event of lead advancing in price. The Cononley Mines were well known at one time, and on them a considerable sum of money was expended by the owner—the Duke of Devonshire—and the main vein, after some difficulties, was cut at a depth of 1200 ft. Some of the side veins were proved to be all but worthless; but a gentleman who has examined the place speaks rather favourably of the western part. The south vein where proved was pretty level, and in the bearing part of the lode varied in width from a few inches to a foot. The ore was different to that in the main lode, being rather loose, but superior in quality to that of the main vein, but not equal in quantity. The ore-bearing zone was of a limited character, extending from the dip to a point rather higher than the upper adit; but the productive ground was less in area than the main vein. Trials were made in the west end of the mine through the lower members of the grit into some limestone shales of what is known as the Carleton anticlinal, which was found to be anything but an easy matter, owing to the cross veins and the weakness of the right running ones. The strata in the western ground was afterwards found to be greatly disturbed, owing to the intersection of several fault veins close at hand.

We are told that upwards of 15,000 tons of ore have been taken from the two veins, which certainly should have been considerably satisfactory, and, one would think, sufficient to justify the opening out of the mine even at the present time. The gentleman who has

examined the ground, evidently with great care, speaks highly of the probable future of the mine in the event of its being opened out. He thinks that although the mine has been closed for a considerable time, the appearance of the vein just close to the east of the disturbance justifies the expectation that it would turn out to be a profitable one were it properly explored west of the intersection, and in the settled beds which are known to exist. Lead ore, it appears, has also been found in the grit a little more than a mile from Cononley, and in a trial made a few tons of ore were raised. In the limestone of the same district ore has been found in veins running north and south, and from these several tons of ore have been raised. Although the veins are uncertain yet the ore is of good quality. It would appear that not much attention has been paid to the deposits of ore in what is known as the kindred grits, and that explorations in all probability would lead to good results. It may be said the argentiferous lead ores in Utah are also found in thick beds of grit, and two series of dolomite. The grits assume the appearance of quartzite, and the limestone in places are coarsely crystalline. The more important lodes occur at the junction of the quartzite grit with the second dolomite bed, but others are found in the granite. Large quantities of lead ore have been found in the Nidderdale district of Yorkshire, and there is every reason to believe that there are extensive areas of mineralised ground, as well as abandoned mines that with modern appliances could even now be profitably worked.

PROTECTION OF SHAREHOLDERS FROM COMPANY OFFICIALS.

When the Companies Act, 1862, was in process of enactment it was foreseen that cases might arise in which company officials might be guilty of acts which disentitled them to the immunity from personal responsibility which the Act in question would otherwise give them; it was, therefore, provided by Section 165 that, "Where in the course of the winding-up of any company under this Act, it appears that any past or present director, manager, official, or other liquidator, or any officer of such company has misappropriated or retained in his own hands, or become liable or accountable for any moneys of the company, or been guilty of any misfeasance or breach of trust in relation to the company, the Court may, on the application of any liquidator, or of any creditor or contributory of the company, notwithstanding that the offence is one for which the offender is criminally responsible, examine into the conduct of such director, manager, or other officer, and compel him to repay any moneys so misappropriated or retained, or for which he has become liable or accountable, together with interest after such rate as the Court thinks just, or to contribute such sums of money to the assets of the company by way of compensation in respect of such misapplication, retainer, misfeasance, or breach of trust as the Court thinks just." The succeeding section makes it a misdemeanour, with a maximum punishment of two years' imprisonment with hard labour, to destroy, mutilate, alter, or falsify, personally or by an agent, any books, writings, or documents of the company with intent to defraud or deceive. The protection which these provisions afford to shareholders against any breach of trust on the part of officials of the company can scarcely be overestimated, and, at the same time, they should suffice to induce due caution on the part of directors and other officers from the substantial character of the penalties.

An important case under the first-cited section has been before the Chancery Division this week in connection with the Great Wheal Polgoon, with which the name of LEDRU ROLLIN REYNOLDS was unfavourably connected. This was an application against Mr. CHARLES TURNER, the solicitor of the company, asking a declaration that Mr. TURNER was a promoter of the company, and guilty of fraud, misfeasance, gross negligence, and breach of trust in relation to the company as such promoter, and as solicitor of the company, in obtaining payment from the company of two sums of 210/- and 100/- purporting to have been paid in respect of his costs; in not disclosing to the directors the substitution of a certain agreement of March 8, 1881, for the sale of the mine between "JAMES ANDERSON" (an assumed name of REYNOLDS, the vendor), and one G. E. HOOKE for another agreement of the same date between L. ROLLIN REYNOLDS (in his own name), and the said G. E. HOOKE, and in not disclosing the information he possessed as to the identity of the said L. ROLLIN REYNOLDS and JAMES ANDERSON; or, if ignorant of the alleged identity, that he was guilty of gross negligence in not making enquiries as to the existence of the said JAMES ANDERSON and the validity of the title to the mine, and for misadvising the directors on the several occasions specified by the liquidator in his summons, which also asked for a declaration that under the above circumstances Mr. TURNER was not entitled to receive any payment out of the assets of the company in respect of his professional services, and that all payments already made to him in respect of such services by the company might be disallowed on taxation. Mr. TURNER was appointed solicitor to the company shortly after its registration, and his name appeared as its solicitor on the prospectus; he distributed some of its prospectuses to intending shareholders, for which a charge was made in his bills of costs against the company, and generally transacted all its legal business till it was wound up in August, 1881. An enormous bulk of evidence was gone through to prove Mr. TURNER's connection with L. ROLLIN REYNOLDS, and in support of the other allegations contained in the summons, and the hearing occupied several days; the most important part of the case, however, turned on the question whether Mr. TURNER, in his actions as solicitor of the company, could be considered as one of its promoters, or otherwise as one of its "officers," so as to be within the operation of the section referred to.

The decision of the Vice-Chancellor was in Mr. TURNER's favour, in so far that the liquidator's summons was dismissed with costs up to the hearing, but the legal profession generally will not congratulate itself upon the effect which the decision is likely to have upon the minds of clients generally. It has hitherto been assumed, though as it now appears without justification, that the fact of a matter having been settled by a solicitor was some guarantee that the absence of fraud had been ascertained so far as the legal acumen of the solicitor enabled it to be ascertained. It has also been supposed that in the case of public companies the solicitor of the company watched equally the interests of the shareholders and of the company in any dealings or proposed dealings between the vendor and the company; but it is now evident that a solicitor is not even required to ascertain whether the name put forward as that of the vendor is really connected with any living representative, or is merely used that the necessary legal documents may be reducible to the usual form. The non-legal portion of the public will certainly be of opinion that the Vice-Chancellor's remarks in giving his decision were by no means too strong. He said that this was a case of very great importance, as he had to consider whether Section 165 of the Companies Act, 1862, was applicable to Mr. TURNER in his capacity as solicitor to this company. The 165th section had been passed for the benefit of companies, but whether it had actually proved beneficial his Lordship expressed some doubt, for it had formed the subject of numerous decisions, which had been referred to in argument, in which the wording of the section had been much discussed and the judges were greatly perplexed, some taking one view and some another; but in his Lordship's opinion the intention of the section was plain—it was to protect the company against its executive. In none of the authorities referred to had it been held that negligence by a solicitor in the performance of his duties constituted a "misfeasance" punishable by this section. The mere performance of the ordinary duties of solicitor to the company, allowing his name to appear on the prospectuses, distributing the prospectuses, preparing the various agreements between the vendor and the company could not make a solicitor a promoter or officer of the company within the meaning of Section 165. No evidence had been adduced showing that Mr. TURNER had ever been required, or had ever volunteered, to act in any other capacity than as solicitor to the company, or that he was cognisant of anything which ought, at that time, to have roused his suspicion. His Lordship, therefore, came to the conclusion that the operation of Sec. 165 could not be extended to the solicitor to the company. With reference to the 210/- and 100/- which had been voted to Mr. TURNER as a present for his services,

his Lordship was of opinion that Mr. TURNER had done wrong in taking them, and he must accordingly account for those sums on taxation as in part payment of his costs. His Lordship then examined *seriatim* all the serious accusations and allegations brought against Mr. TURNER, and came to the conclusion that the liquidator had entirely failed to prove them.

The result is one upon which Mr. TURNER may be congratulated in more ways than one; the learned Judge has declared that none of the authorities have held that negligence by a solicitor in the performance of his duties constitutes a "misfeasance" punishable by the section which affects other officers of the company, but his Lordship has further made it known to the public that a solicitor's fees are sometimes so excessively reasonable that his client considers him entitled to a handsome douceur in addition to his costs. But the decision will be unsatisfactory to shareholders and capitalists since henceforth the name of a respectable solicitor on a prospectus will afford them no guarantee that the validity of their titles has been investigated, nor even that the mere existence of the parties to contracts affecting the company has been ascertained.

SCOTCH PIG-IRON WARRANT MARKET.

Mr. W. WILSON (Glasgow, June 7) writes:—The warrant market was dull and drooping in the fore part of last week, but on Friday buyers took encouragement from a report that certain furnaces may go out. However desirable it is in some respects that production be reduced, it would seem that at present other counsels prevail among ironmasters, and that, for a time at least, the production of iron in Scotland may be further increased. It is likewise unsatisfactory to see fresh start given to the storing of iron. The shipments for last week again compare favourably, and for the year they have so far kept up to the figures of 1882. 190 tons have been taken from store here last week, and 470 at Middlesbrough. Business was done during the past week at the following prompt cash prices:

	Thursday, May 31.	Friday, June 1.	Monday, June 4.
46/3, 46/6	46 1/2, 46/10	46/10, 46/3, 46/9, 46 1/2	
46/3 1/2, 46/11	46/11, 46 1/2	46 1/2, 46/3, 46/8, 47	
	1833	1832	1830
Price of Scotch Warrants on June 4	46/0	47 1/2	45/8
Furnaces in blast in Scotland do...	117	119	116
Shipments of Scotch pig-iron for week ending June 2.	11,609	9,867	13,198
Do. since beginning of year	259,158	259,977	326,344
In iron store at this date	578,490	637,327	561,578
Price of Middlesbrough, No. 3, June 4	39/3	43/3	36/6
Furnaces in blast Middlesbrough dist.	120	119	119
Middlesbrough Iron Imported at Grangemouth, week ending June 2.	6,730	3,415	5,015
Do. do. since beginning of year	12,062	100,427	125,535

IRON AND STEEL TRADES.—The Board of Trade Returns just issued are decidedly unfavourable as regards these branches of industry. The total exports for the month were 374,579 tons, being a decline of 2839 tons as compared with May, 1882, but an increase of 17,915 tons over the total exports of May, 1881. For the five months the total exports of iron and steel were 1,591,873 tons, or a decrease of 124,756 tons upon May last year. The total value of the exports for the month were 2,607,740L, or a decrease of nearly 64 per cent. upon the corresponding month of last year; but compared with May, 1881, there was an increase of over 64 per cent. For the five months the total was 11,823,726L, being a decrease of nearly 64 per cent. upon the same period of last year.

COPPER EXPORTS.—The exports, as shown by the Board of Trade Returns, are fairly good. Unwrought copper shows an increase of over 25 per cent. in value for the month, and of nearly 60 per cent. in value for the five months, wrought copper declined about 26 per cent. in value for the month, but for the five months there was an increase of a little over 2 per cent. In brass, however, there was an increase in value for both periods of 25 per cent. and nearly 15 per cent. respectively. On the other hand, mixed or yellow sheathing declined about 15 per cent and nearly 25 per cent. for the month and the five months.

INDUSTRIAL EXHIBITIONS IN THE UNITED STATES.—Two exhibitions to illustrate mining are to be held this year in the United States. The first is to be at San Francisco in the month of August, and will consist of the donations to the California State Museum and a large loan collection. The second will be held at Denver (Colorado) from July 17 to Sept. 30, and is to take the higher character of a national mining exhibition.

MINING IN IRELAND—COAL MINING OPERATIONS AT DUNGANON, COUNTY TYRONE.—A number of men continue to be employed by Lord Ranfurly, in Dungannon Park, in the above county, in boring operations, with the view of finding the beds of coal which are believed to underlie this portion of his lordship's estates. Mr. Killen has the management of the work. The excavations are now within a yard of the depth at which they sometimes since found the 18 in. seam, and the operations are proceeding at a distance of about 1 1/2 miles from the old shaft (from which the Hibernian Mining Company raised coal for a considerable period), and two miles from where the present Tyrone Coal Mining Company is engaged working. The seam that lies in the park is at a far greater depth than at either of the last-named places. It is understood that a company will carry on the coal mining if the boring is successful, with a capital of 70,000L, Lord Ranfurly to be the Chairman. From the geological surveys made it is believed that the estate abounds with coals and other minerals of value.

THE IRON MINES OF DECOMET, COUNTY DOWN.—These mines, situated on Lord Trevor's estate, are in a direct line about 32 miles from Belfast, on the Great Northern Railway, and 4 miles distant from the station at Ballymoney. Formerly they were worked by an English company, the ore being conveyed by a traction engine to Dundrum, a distance of 15 miles. Judging by the ancient tools recently found in the mining operations it is obvious that the mines were worked centuries ago. It would appear that a Belfast company are now about to attempt to develop these ores. Great extensions were not so long since made on behalf of the Central Railway Company to make an opposition line of railway to Dromore, with the sole object of developing the rich iron ore of Decomet at a cost of nearly 14,000L. The Central Railway Company, who are composed of English capitalists, knew well the quality of the Decomet iron ore and its value, and hence the anxiety of a Belfast company to take the matter over. The latter understood that the Antrim iron ore found between the upper and lower basalt rock of Antrim does not come up to the percentage of iron of the hematite iron ore of Down. If a vessel arrives in Belfast with a cargo from a foreign port, and a return cargo is not found in pig-iron, at least there can be procured hematite iron ore that finds a ready market in any part of the world, and hence the anxiety of the Belfast shipowners to see this iron ore brought to Belfast as soon as possible. The Decomet or County Down ore has its own peculiar value. Naturally it is magnetized, and this magnetized iron ore is only found out of Ireland on some of the shores of the Mediterranean—in Corsica and Elba. In the former country it is pronounced to be the best iron known. For the manufacture of steel this iron ore stands pre-eminent. A lump of it about the size of an egg applied to a pocket compass attracts the needle as if it were a magnet. It is in contemplation to make a narrow-gauge railway from the mines at Decomet to Ballymoney, at a cost of 6000L. The promoters of the development of this ore have another object in view. When once this ore is brought to Belfast it will soon be mixed with the Antrim and other Irish ores from Coalisland and Donegal, &c., and with the vast quantities of lithomage lime, moulding sand, sandstone, fire-clay, &c., that are locally procurable Belfast will probably come to be a considerable iron centre. It is computed that there are 30,000 tons of manufactured iron annually imported into Belfast that could easily be supplied at home even with the cost of the importation of coal. Englishmen in Belfast maintain that there should at all events be exported as much iron ore from Antrim and Down as there is imported of coals—

900,000 tons annually. The Rev. Mr. Finnegan, of Leitrim, has pointed out a rich iron hematite mine in his district which remains practically undeveloped.

REPORT FROM CORNWALL.

June 7.—There is very little of an encouraging character to note in the present aspect of mining affairs, and the current mine accounts are not of a character to cause much improvement. Interest now, of course, mainly centres in the special meeting of the Dolcoath adventurers on Monday next, when it will have to be settled what is to be done with the "Mayne shares," so far as they can be identified, a point upon which we are without any official information; and how, in the presence of this watering of the stock, the balance of the "fine" is to meet. Possibly one or two other points, not the less important because of an incidental character, will come up for discussion, and there may be somewhat of a surprise in store.

The one meeting that would give an impulse in the right direction just now would be that of Cook's Kitchen; but it is not to be held at present, and is postponed until August, so as to enable the management to bring the improved condition of the mine consequent upon the cutting of the Dolcoath south lode fully before the shareholders. Cook's Kitchen has had an uphill fight for years, but the reward has come at last.

A striking illustration of the effects of the decadence, indeed disappearance, of mining of late years within the Marazion district, has been supplied in the course of a current enquiry into the county assessment. Not many years ago the wharves and quays at St. Michael's Mount brought in an annual revenue of somewhere about 600*l.*, almost wholly of a mining character. Last year they yielded only 20*l.*. There is every room, therefore, for improvement, and it is earnestly to be hoped that the spirited efforts now being made to revive mining in this locality will meet with the return they so thoroughly deserve.

The decision in the South Dolcoath case is of such an important character that we did not refer to it last week pending the knowledge of the full hearing of the judgment of the Vice-Warden, which was understood, however, to be in favour of Mr. Eyre, the plaintiff, and against the company. It will be seen that the points involved are of a very grave character, inasmuch as if we are right in our interpretation of the judgment, a company purchasing a sett may be saddled with liabilities to a serious extent, of which it was wholly in ignorance. Of course, in equity there would be a claim against the seller to the company; but there are plenty of claims that have no remedy, whatever may be the case here.

Mr. Eyre being entitled to the South Dolcoath sett on Sept. 24, 1881, agreed to sell it, with the plant generally, to Mr. Henry Lambert, who signed an agreement for purchase at 2500*l.*, of which 1250*l.* was to be paid in cash, and 1250*l.* was to be represented "by fully-paid up shares without liability in the mine and mining effects, and the profits to be divided from the sale or working thereof, according to an arrangement to be mutually agreed upon." Pending the completion of the purchase there was to be no removal of the plant and machinery or interference with the buildings. Mr. Lambert, shortly after the signing of this agreement, formed a syndicate, and promoted a company for working the mine on the Cost-book system. The mine proved a failure, and upon the petition of certain creditors the company was in the latter part of last year ordered to be wound up. Mr. Eyre, who had received the cash moiety of his purchase-money, but had not received the other moiety in shares or otherwise, now sought to prove, in the liquidation, for the balance of his purchase-money, either in cash or at a claim on the plant and machinery and sett. This claim was opposed by the liquidator, and referred to the Vice-Warden.

The points relied upon by the liquidator were:—1. That there was no privity between Mr. Eyre and the company, the contract for sale being a personal one between Mr. Eyre and Mr. Lambert. 2. That the claim was a mere question of damages. 3. That Mr. Eyre's lien on the plant and machinery had been lost by his acquiescing in their being handed over to Mr. Lambert, and by him to the company. The facts proved were strictly as follows:—That Mr. Eyre had acquiesced in the plant and machinery being handed over to Mr. Lambert and the mine worked by him on the Cost-book System; that Mr. Lambert had formed a company and worked the mine on that system; that the company were unaware of the agreement of Sept. 24, 1881, or that there was anything still due to Mr. Eyre under that agreement; that Mr. Lambert had taken half the shares in the company, of which he was also the purser and secretary; that Mr. Lambert admitted that Mr. Eyre had still a claim in respect of his balance of purchase money. It was also proved that the license given by Mr. Eyre was confined to the working of the mine and use of the plant and machinery for that purpose only; that Mr. Eyre had throughout refused to take shares on the Cost-book System, and had always insisted upon having shares of Limited Liability or the equivalent thereto, as provided by the agreement of Sept. 24, 1881; that Mr. Lambert had not complied with this agreement in this respect; and that Mr. Eyre still held the sett, which had never been assigned. The Vice-Warden allowed Mr. Eyre's claim upon the grounds:—1. That it was not necessary that there should be any privity between Mr. Eyre and the company.—2. That Mr. Eyre had substantiated his claim for a liquidated amount, which was not, therefore, one of mere damages. 3. That the handing over of the plant and machinery to Mr. Lambert had been for a limited purpose only, and that there had been no absolute delivery of the same to Mr. Lambert or the company.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

June 7.—The anticipations of the past week or two concerning the early action of the Cannock Chase coalmasters have now been realised. Summer prices have since last report been officially announced. Compared with the prices which have ruled throughout the winter the new list is a drop of 1*s.* in coal, and 6*d.* in rough slack. Best deep house coal now becomes 10*s.* per ton, and in actual business forge and steam (shallow) coal of very quality becomes 5*s.* 6*d.* per ton of 21 cwt., into trucks, and 6*s.* per ton into boats, long weight. Fine slack is unaltered at 2*s.* 6*d.* Supplies of forge coal are leaving some of the collieries on the Chase for North Staffordshire to help the ironmasters to keep their works partially running. Now that the native supply is largely stopped by the strike cokes are in abundant offer, and prices are steady at for best foundry (Durham) sorts 24*s.* delivered, and best furnace (Welsh) 17*s.* 6*d.* The pig-iron trade keeps quiet at 42*s.* 6*d.* to 40*s.* for common native sorts, and 65*s.* to 62*s.* 6*d.* for all-mine hot blast pigs. In finished iron prices here and there are slightly stronger, and some sheet makers are trying to get a 5*s.* advance.

The Mines Drainage Commissioners, at a monthly meeting in Wolverhampton on Wednesday, gave their sanction to important works in connection with the deep drainage of the Tipton district. Two engines are to be put down, one at a cost of 887*l.*, and the other at a cost of 933*l.*, whilst tanking will be arranged for at an outlay of 244*l.* Moreover, levels will be driven in various parts of the Tipton district at an expenditure of between 4000*l.* and 5000*l.* The aggregate outlay sanctioned is some 25,000*l.* The work will be put in progress as soon as possible, but all the levels will not be completed for a year. This is a bold attempt to grapple with the great deep water difficulty, and as such is hailed with much satisfaction by the whole district.

Fire-damp broke out with nearly fatal results in one of the pits belonging to the West Bromwich Colliery Company at Gold's Green, near Wednesbury, on Tuesday. A number of miners were down at the time, and were partially suffocated, but fortunately one of the workmen was able to signal to the banksman. Help was quickly rendered, and the men were resuscitated.

The colliers' strike in North Staffordshire continues, and both masters and men seem determined to go on with the struggle. There are still nearly 8000 men and boys out, the majority of whom are non-Unionists, and collections are being made for them in North Staffordshire and other districts. The Union men are receiving a weekly allowance of 10*s.* per man and 1*s.* per child. The non-Union men are not nearly so well off, their grant this week amounting to

3*s.* 6*d.* per man and 6*d.* per child in one part of the district, and 2*s.* 3*d.* and 4*d.* respectively in the other part. At a meeting of delegates on Tuesday a suggestion as to making overtures to the employers to return to work at the old rate of wages was mooted, but it was not entertained.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

June 7.—The Iron Trade of Derbyshire is by no means so active as it was in the earlier part of the year, but this has in no way diminished the production of pig at the various works. Staffordshire has been a good market for Derbyshire pig, more especially for the mills; but the requirements appear to have declined in that quarter. Under such circumstances prices have gone down, as they have indeed in all other districts of late. But as the blast-furnaces in most instances are connected with extensive foundries, including those at Staveley, there is always a considerable proportion of the pig required for the makers' use, and fortunately just now there is more doing at the former, more particularly in heavy pipes, for which some of the works have a wide reputation. Roiled iron has not of late shown to the same advantage as formerly, for at one large establishment several mills and a large number of puddlers were kept constantly going. Girders at one time were a speciality at the works alluded to, and from which some of the largest made were turned out, such as those that span the fine station at St. Pancras. But of late years it would appear that the Belgian makers have successfully competed with us, even in our home markets, and the products of the Belgian mills are to be found in connection with many of the largest buildings in our principal towns. Malleable iron has been in steady request for various purposes, this branch not being now confined to small castings. The demand for house coal has sensibly fallen off, and prices have gone down in some instances as much as 1*s.* per ton. Considerably less has gone to London since the present month set in, and of course the same may be said with respect to other districts, where of course the consumption is not by any means so heavy. The consequence is that the miners are only working some four and some five days a week, so that there is no necessity for their combining for the purpose of limiting the output of coal, for they now find out to their cost that such can be brought about by other means than agitation. However, they are now forced into what they thought could only be obtained by a struggle with their employers, and that with less work they have less wages. This is contrary to the doctrine preached to the men, that the less coal that was raised the higher the price would go, and wages would of course go up at the same time. Experience, the best of mentors, has shown that such a doctrine does not always hold good.

In Sheffield, trade appears rather more satisfactory than it did even within the last few weeks as regards some of the lighter branches. The heavy departments continue as active as ever, for both Cammell's and Brown's are running their mills to the full extent on the heavy orders they have in hand for steel-faced armour-plates, whilst a good business is also done in ordinary ship and boiler plates. In both Bessemer and crucible steel the production has been large, especially as regards the former. Notwithstanding the new American tariff, which will shortly come into operation, a good deal of plain steel, cutlery, and general hardware is being forwarded to that country, and there is every reason to believe that a good trade will be done with the States in several well-known Sheffield products that are much appreciated and have a high reputation on the other side of the Atlantic. Australia of late has been a fair customer for our goods, and so has India. In the home markets the favourable change in the weather has led to orders being rather more freely given out. The Bessemer rail trade has not improved, but this appears to be the fault of the makers, who do not care to take orders at the current rates, which scarcely reach 5*s.* a ton. Indeed, it would almost appear as if this important branch of trade, which was first established in Sheffield, is fast leaving the place of its birth, and taking up its quarters on our sea-board. The cutlery houses have been kept steadily going without any push, the best qualities being in most request, despite the advance which has taken place in the price consequent on the increasing prices that have to be paid for both ivory and pearl, the former getting scarcer owing to the extermination of the elephants which has been gradually but surely going on. In edge tools, railway material, other than rails, and castings for machinery business has not declined.

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

June 7.—Standing in the midst of the Cardiganshire lead mining district, the one idea a superficial observer would form would be that of utter stagnation, wheels motionless, and dressing-floors idle and untenanted. Yet a little further acquaintance with the condition of things around him would show that there was silent yet sure preparation going on for the future, and much hopeful but unobtrusive work progressing. He would also find that the motionless condition of the machinery was in great part due to the total absence of rain. That water will come is confidently hoped, and in this hope new machinery is being erected at Bryn-yr-afr and at Silver Stream Mines. At the latter mine the machinery is all but ready, and good ore is being raised for it. At Bwlch ore is being prepared for the machinery, if the machinery for want of water cannot prepare the ore. Explorations are going on at Goginan and West Goginan, to which we wish success.

Her Majesty's Commissioner held a meeting in Oswestry last week to enquire into the propriety of allowing the Corporation to borrow money to pay for land on which to construct a reservoir near the source of their water supply at Penygwyd, five miles from the town.

The slate depot at Machynlleth is very full of slates, but the loading of slabs is going on freely, and there are signs of a revival of the slate trade in the Corris district.

The brick trade of the Ruabon district is fairly busy, and the terracotta trade from the red marls of the Permain seems constantly expanding.

TRADE IN SOUTH WALES.

June 7.—The unexampled activity of the Steam Coal Trade which has characterised the district the whole of the present year still continues, and there is no present prospect of any relaxation, but rather increased pressure, more especially during the next three or four weeks. The effect of this is, that all orders for immediate execution can only be done at an advance in prices, while those who made their yearly contracts last autumn now perceive the benefit of their foresight. Prices, however, have not advanced to any great extent, but even 3*d.* per ton on large orders is a consideration for the customer. The amount sent away from Cardiff last week was 135,383 tons tons foreign and 19,188 coastwise; Newport, 29,613 tons foreign and 21,037 coastwise; Swansea, 21,007 tons tons foreign and 9460 coastwise.

The general state of the coal trade in Caerphilly, Bedwas, and Machen is at present in a very favourable condition, house and gas coals having a good demand in the market. In the Caerphilly district collieries are working full time, and the output of coal last week was equal to the average. The new colliery undertakings at Llwyd are progressing very favourably, and show every prospect of proving a success. The Bryn Glyn Colliery, which is situated on the west side of Bedwas, and the largest in the district, continues to raise a large tonnage of coal weekly, the greater part of which is shipped at Newport. A large fault, which proved to be an "upthrow," has successfully been worked through. This will facilitate the working of a very large seam of coal.

The colliers employed at the South Wales collieries, numbering some 800 hands, are much concerned in a decision which has been recently given with reference to the use of locked lamps in the Cwm-tillery Collieries. It appears that the question has been pending for some time whether locked lamps should be used at the collieries or not. Up to the present time the colliers have been working with naked lights, but a week or so ago they were informed that they would soon be obliged to work with locked lamps. Whatever may have been the theoretical opinion of those who carried on this important enquiry, the colliers are unanimous in their opinion that it

will be very difficult to carry out the umpire's award in practice; and last Thursday week they held a mass meeting at Penybont to consider their position. Several old and experienced workmen spoke of the hardship they would be under by being compelled to work with locked lamps, whereas their brother colliers in the surrounding district were working the same vein of coal with naked lights. Several of the speakers have been working in the South Wales collieries for 12, 15, and 20 years.

The Iron and Steel Trades of the district are in much the same position as when last reported on. There is a sufficiency of orders at very low prices. Some parcels, amounting to 2322 tons, have been sent away from Cardiff, while Newport has exported 1850 tons to Buenos Ayres, 1650 tons to Emu Bay, 1415 tons to Vera Cruz, 1250 tons to Ancena and Trieste, 960 tons to Elsingborg, 850 tons to Rio de Janeiro and Valparaiso, and 130 tons to Oporto. Iron ore, which is now in slack demand, has been received at Cardiff to the extent of 12,329 tons from Bilbao, and 3229 from other places; Newport has received 10,120 tons from Bilbao, and 8928 from other places. The price remains at from 13*s.* 6*d.* to 14*s.* per ton.

The Tin-Plate Trade shows some signs of improvement. Ordinary cokes are quoted at 15*s.* 9*d.*, but good brands realise from 16*s.* to 16*s.* 6*d.* per box, while charcoal made fetch from 18*s.* 6*d.* to 21*s.* per box. The orders now coming in are genuine, and not from mere speculation.

TRADE OF THE TYNE AND WEAR.

June 6.—A large business has been done during the past week in the coal and all other trades; the demand for steam coal continues to improve, and 10*s.* per ton is now demanded generally for the best of this class. Orders are in hand for some time to come, and ships have often been detained of late, much to the chagrin of their owners. Much surprise is expressed that the output (daily) at some of the large steam coalworks has been reduced some 10 per cent., but this always occurs when the men are fully employed six days per week, when short time is worked the output in the working days is always increased. The demand for steam small coal continues good, and 4*s.* per ton is now got for it, the price having doubled during the past year. The demand for gas coal continues fair, and also for house and manufacturing kinds. The demand for coke appears to be rather quiet at present, the requirements for shipping are not so pressing, and the demand from the West Coast has also fallen off to some extent.

The steam coal field in Northumberland is now certainly being rapidly exhausted. The main thick seam, which was 5 ft. and upwards in thickness, has been exhausted in many localities, and the supply of steam coal is, therefore, derived from the Yard seam. Now, this seam called the Yard seam is excellent steam coal, but at many points it is really only 2 ft. 4 in. in thickness. The whole produce of an acre of this seam is about 3630 tons. At many of the works 1000 tons and upwards is extracted from the seam per day, and if we take five working days per week we have 5000 tons per week, or 250,000 tons per annum, equal to 68 acres per annum, or nearly 700 acres in 10 years. This seam has been worked for a considerable period in some parts of the county, and it is evident that the whole seam will be exhausted in a comparatively short period. Of course, we have no data at present from which to estimate approximately the duration of this seam; but the question must force itself upon the attention of the parties interested at no distant date, and the question of the probable quantity of coal existing in the main and other seams under the sea must naturally attract considerable attention shortly. This important question has been already tested to a considerable extent at Cambis, in North Northumberland, where explorations have been made to a considerable extent under the sea, and the coal is found of excellent quality and considerable thickness. It appears, therefore, reasonable to conclude that a large supply of this coal will be found on the coast near this point. At Ryhope, about 6 miles south of the Wear, a considerable quantity of coal has also been worked under the sea. The distance between these two points (Cambis and Ryhope) is about 20 miles; there can, therefore, be no reasonable doubt that a very large tract of coal will be got under the sea on this coast. The Marsden new winning, near South Shields, is at a very short distance from the water line, and exploring drifts will be driven out there shortly, which will further test the question. This remarkable winning is about equidistant from Ryhope in the south and Cambis in the north, and the result of the explorations here will be watched with much interest by all who are interested in the coal trade of this district.

A reply has been received from Mr. Gladstone in answer to a memorial sent from the Chamber of Commerce here against the City of London Coal and Wine Dues. The answer is deemed fairly satisfactory, inasmuch as it promises that the best attention of the Preuer shall be given to the subject. At Shire Moor Colliery, situated near the coast, about 3 miles south of the Tyne, the steam coal seam is worked by longwall, and very large fine coals are produced by this method of working. The famous High Main coal seam has been won lately at these works, and it has been found to be no less than 8 ft. in thickness. The old men partly worked the seam at an early date, but a considerable amount of coal, in the whole and in pillars, still remain. The old workings have been penetrated to some extent, and some very interesting relics of the old men have been found—a number of wooden sledges, shovels, &c., have been found. The coals in the old times have been hauled out in corves or wicker baskets placed on those wooden sledges.

The Iron Trade has remained quiet this week, yet iron is being sent away on a most satisfactory scale. The Scotch "bears" are still blamed for the state of the iron market. It appears that rings are periodically formed at Glasgow, but their secrets are well kept. Demand for finished iron continues weak, and the prices are low. The continued strike at the colossal works of Bolckow and Vaughan, at Middlesborough, is still a disturbing element, and at present there is no probability of a settlement; the men are, so far, very resolute in opposing the reduction, while steel rails are so low in price the reduction appears to be an absolute necessity. The manufactured iron trade has been rather dull, and there is little change in prices. Ship plates are 6*s.* 2*s.* 6*d.*; bars, 5*s.* 17*s.* 6*d.*; angles, 5*s.* 12*s.* 6*d.*; boiler plates, 7*s.* 2*s.* 6*d.*. There is a general advance being made by degrees in the wages of the engineering operatives on the Tyne and Wear districts, and no doubt the Teesside and other parts of the North of England will have to follow the movement. At several of the works on the Tyne no settlement has yet been arrived at, including the North-Eastern Railway Company, Messrs. Joicey's Works, Newcastle, &c. The return of shipments of iron, though it has failed to influence the range of prices, is highly satisfactory, the delivery of pig-iron for May being 87,783 tons, and 29,728 tons of manufactured iron and steel. This is considerably in excess of the deliveries in May, 1882, when 71,493 tons were exported. Scotland and Germany took a large portion of this. There is no change in the value of pig-iron. Connal's stocks are now 77,593 tons, a reduction in the week of 439 tons.

The North-Eastern Steelworks, Middlesborough, are nearly completed, and some important tests in steel-making was made on Thursday last. The steel is manufactured from Cleveland iron by the basic process. The first blow made at these experiments showed only from 3 to 4 per cent. of phosphorus. Altogether five tons of ingots were produced, and a careful analyses of the foreign substances in the newly-blown steel showed not more than 8·2 per cent. This is one-fourth of the quantity usually contained in steel made from the purest hematite. This is certainly a most remarkable result. The output of the works, it is estimated, will be from 2000 to 3000 tons weekly. Rails, blooms, &c., are to be manufactured. The return of the Cleveland ironmasters, showing the make and disposal of pig-iron by the associated ironmasters of the North of England during May was issued on Monday. The statistics, as furnished, show that at the end of May there were 118 furnaces, as compared with 120 at the end of April. The furnaces on Cleveland iron remain the same—83. A furnace making Cleveland iron has been put out at Consett, and another at Seaton Carew, and one at the latter place hitherto making hematite has been put on Cleveland iron. The make of Cleveland iron for the port of Middlesborough in May was 126,629 tons, against 124,119 tons in April, and the total made for the entire district of Cleveland iron was

158,223 tons, as compared with 152,035 in April. The total make of all kinds of iron for May being 236,825 tons, as compared with 229,217 tons in April, an increase of 7608 tons. The Middlesbrough makers still restrict the output to the extent of 12½ per cent.

The iron shipbuilding trade and the other trades connected with it continue very good indeed, and great exertions are making to get the new works into operation. At the extensive works of the Armstrong-Mitchell Company, at Elswick, where it is intended to build war vessels of the very largest type, there will be no less than 11 building berths, two of which will be 70 ft. in width. Another firm has commenced to build small iron vessels on the south side of the river near Dunston. And yet another large shipyard is projected to be opened at the mouth of the Team river. A private firm with ample means is expected to carry this project out. The number of iron shipbuilding works on the Tyne, it will be seen, is rapidly increasing, both above and below the bridges.

SOUND INVESTMENTS.

The Stock and Share Markets have been characterised by great depression during the past month, owing to the disturbance occasioned by the heavy failures which have taken place. These proved to be of such magnitude and from such totally unexpected quarters, that almost a feeling of panic prevailed, and as is usual at such times real values and merits were utterly disregarded, every class of investment suffering alike. No better evidence of the irrational nature of the fluctuations during the month can be afforded than the fact that while a purely speculative stock, such as Mexican Three per Cent. Bonds advanced from 27 to 32 on the mere proposal for the arrangement of the debt by the Mexican Government, the terms of which, however, seem to be scarcely acceptable to the general body of creditors, the best description of English railways fell from 2 per cent. to 9 per cent., and American, Canadian, and Mexican railways, and similar securities were depreciated much more seriously. In many instances, and notably in those of two investments which I have recommended from time to time—the Grand Trunk and Mexican Railways—the fall has been intensified by the circulation of numerous adverse pamphlets and reports, the opportunity being too good to be missed by the many speculative operators for the fall to break down the market for these stocks, and to cause alarm in the minds of *bond fide* holders. Proprietors should remember, however, that although these particular securities have fallen since last year they are by no means in an exceptional position, for as compared with the year 1882, many other leading undertakings have suffered still more severely. Thus, amongst British railways Brighton, A, stock fell from 146½ to 99½, South-Eastern, A, from 132 to 108, Caledonian from 113 to 103, Furness from 160 to 129, Rhymney from 235 to 166. All American lines fell, especially Wabash Preference from 74½ to 44, Wabash Ordinary from 40½ to 27½, Louisville and Nashville from 106 to 50, Denver and Rio Grande from 75 to 40, and even Suez Canal fell from 138 to 92. The steady downward course of prices which has been going on for some time past in every direction is evidently due to the constant closing of large speculative accounts for the rise, and there is reason to hope that the events of the past month have finally disposed of all weakness in this direction. Indeed, it was evident at the last settlement that the volume of speculative transactions had been greatly reduced, and although there is still great dearth of investment business signs are not wanting of the public having recently given some support to the market by the absorption of many securities at the depreciated prices. The removal of the incubus which this speculative account for the rise had occasioned, the lower range of quotations, favourable harvest prospects, cheap money, and the settled aspect of political affairs, should have the effect of again attracting investors to the stock markets.

ENGLISH RAILWAYS.—Although there has been a general decline in quotations the fall has been serious only in two instances—Brighton, A, stock, which fell from 110½ to 99½, and North Staffordshire from 93 to 84. Both these stocks have been specially affected by the failures which have taken place, but from the lowest points there has been a recovery, Brighton, A, being now quoted 109, and North Staffordshire 87. Some investment buying of both has taken place, and of the two I think North Staffordshire is best worth attention. It is not so speculatively held as Brighton, A, and, therefore, the fluctuations in price are much less frequent; indeed, if it had not been for the enormous amount of stock which had to be sold for one of the firms which recently failed, there is little doubt it would have continued to steadily improve. There has for a long time past been a quiet absorption of this stock going on by the investing public, and in view of the continued favourable earnings of the railway I do not think it will be long before the price again reaches 90. It is by no means improbable that the dividend this year will be 4 per cent.—Great Eastern fell from 77 to 73½, but has since recovered to 75, in view of the steady progress which the line is making.

WEST LANCASHIRE RAILWAY.—A small amount of investment business in the Preference shares of this railway took place early last month, and but for the general stagnation there is little doubt more active dealings would have prevailed, as the favourable features referred to in my last circular have gained new force owing to the capacity of the line having been put to a severe test by the strain of the Whitsun tide holiday traffic to Southport. This was exceedingly heavy, but it was worked so well as to have called forth much commendation in the district, where the shares are largely held, and where confident hopes are expressed as to the future of the undertaking. For the reasons previously given there can be little or no risk in buying these Five per Cent. shares at 6½ or 5 per cent. discount, and I think they may safely be regarded as a progressive home railway investment.

RAILWAY INVESTMENT TRUST.—The 4 per cent. Preferred stock must be very cheap at the current price at 97, being practically a Preferred Ordinary stock of the London and North-Western, Midland, North-Eastern, and Glasgow and South-Western Railways, whose Ordinary stocks compose this trust. On the basis of the value of Great Northern Preferred Ordinary the price should be 102. When the securities of this trust are admitted to the privilege of a quotation on the Stock Exchange they will no doubt command much higher prices in the market.

GRAND TRUNK RAILWAY OF CANADA.—The events of the past month as affecting the securities of this railway, may be briefly summarised as follows:—On the favourable side, a continued increase in earnings every week, and on the adverse side, an incessant number of disparaging reports accompanied by a flood of pamphlets and circulars all picturing the position in the most sombre colours. The attack which has been made upon this property during the past four months has been most determined, and every expedient has been resorted to in order to bring about a fall in quotations. To such an extent have holders of these stocks been persecuted that scarcely a day has passed without the appearance of depreciatory articles, false reports of disastrous floods or accidents, exaggerated rumours as to cutting of rates and threatened competition, virulent circulars demonstrating all sorts of disasters, or argumentative pamphlets showing what dividends will be, or rather will not be, earned in the future. Without attempting to answer all the malicious and depreciatory statements which have been put forward, a careful study of the last report and accounts, and further enquires upon specific points at the offices of the company, indicate that there is nothing in the internal condition of its affairs to warrant the collapse which has overtaken the stocks of this railway. The earnings this half-year already exhibit an increase of 186,903 £., and unless it can be shown that the Grand Trunk Railway has passed its highest point of development, and that instead of further progress the line is henceforth to recede in position, it is only reasonable to look for a recovery after the heavy fall which has taken place.

It is very difficult to estimate the result of the current working, owing to the figures not having been made up at June 30 last year; but, judging by the increased net surplus to the end of April, and the benefit to accrue from the more profitable working of the Chicago

extension and other subsidiary lines, I think it by no means improbable a surplus will be available for the Third Preference Stock this half-year. With regard to the future, no one can pretend to judge better than another, but from the personal knowledge acquired by my own careful examination of the railway and its connections, and from the manifest signs of general advancement and prosperity throughout the Dominion of Canada, I shall be greatly surprised if the G. and Trunk Railway does not again show marked improvement at the end of the present year.

MIDLAND RAILWAY OF CANADA.—In continuing to recommend investments in the Mortgage Bonds of this railway, I cannot do better than quote from the directors' recent report, that "while the winter just passed was one of unusual severity, the traffic prospects are more promising than they have been for years past."

NEW YORK, ONTARIO, AND WESTERN RAILROAD.—Considering the great depression in the market for American Railway Securities these shares have maintained a steady position. The West Shore line, giving the Ontario Company access into New York, was opened this week, and great benefits are expected to be derived from this connection. Last year these shares were as high as 31, while with this important extension now opened they are only quoted at 27.

PHILADELPHIA AND READING RAILROAD.—The continued increase in net earnings, the leasing of the Central of New Jersey Railroad, and the satisfactory settlement of the disputes in the iron and coal trades in America have all conduced to the improvement in quotation of these securities. At 11 the Deferred Income Bonds must be a safe purchase for the future. It is significant that of late the buying of shares and bonds has been on American account.

NORFOLK AND WESTERN RAILROAD.—This line continues to make very satisfactory progress, the monthly earnings again showing considerable growth. For April the net increase amounted to \$19,202. Both the Six per Cent. Mortgage Bonds at 105, and the Preferred Shares at 44 are cheap, and must improve in sympathy with the advancing prosperity of the railway.

MEXICAN RAILWAY.—The fluctuations in the Ordinary Stock have been more violent than in any other security during the past month. Immediately on the announcement of the 14 per cent. dividend heavy speculative selling took place, and the quotation was considerably depreciated. The fall was further aggravated by the unfavourable interpretation which was put upon the directors' report by those who were desirous of further depressing the stocks. The board were blamed for having dealt so fully with the various matters which have so frequently been made the groundwork for attacks upon the property, and then to have come before the shareholders at the meeting with explanatory statements showing how little they need fear them. If, however, the directors had not referred to them in their report there would have been still more cause for complaint, as it would have been said that they had no answer to any of the arguments brought forward. From the re-assuring statements of the Chairman at the recent meeting I think the proprietors are justified in looking forward to the future without apprehension; but although, as he pointed out, they have little need to fear competition, it is quite likely an effort will be made before long to obtain capital for a competing scheme, though I think it very improbable that shareholders in this railway or investors generally will support it.

With respect to the advice which has been so freely offered to holders to realise, I would remind them that it invariably comes from those who are personally interested in bringing about a fall in quotations, and I would ask proprietors to remember that if these advisers are so well informed, they have been conspicuous by their silence during the time the railway has been advancing in prosperity. Those who have invested on my recommendation have little cause for complaint, as nearly all my friends have bought at the lower prices, and since 1879, when I first recommended buying at from 7½ to 10½ for the 1000. Ordinary Stock, they have received no less than 19½. 10s. in dividends, and the stock is now quoted at 12½ ex dividend, and must be earning from 12 to 15 per cent. for the current half year.

INDIAN GOLD MINES.—The special reports issued last month by three of these companies have caused universal disappointment, great surprise being expressed that they are so totally at variance with the accumulated testimony of the many mining experts and engineers who have inspected the properties during the past three years. In the meantime, it is extremely puzzling to find that the manager of the Phoenix Company continues to reiterate his positive opinion as to the ultimate successful working of that enterprise, and the proposed amalgamation of the Phoenix and Consolidated Companies will afford him ample means for proving the correctness of his views. The union of these two companies, as well as that of the Glenrock and Trevelyan, cannot fail to meet with the approval of all shareholders, as it ensures an immediate large saving of expenses both in London and India. It is intended to carefully husband resources, to devote more attention to deeper workings and to the testing of the improved systems lately introduced for the treatment of gold-bearing quartz.

LA PLATA MINING AND SMELTING.—The arrangements for completing the transfer of this undertaking to an English company are now completed, and the necessary documents have been forwarded to New York for the meeting on June 21, when the absolute control and management will be transferred to London. Meanwhile the works continue in full operation, and liabilities are being greatly reduced out of current profits. It is probable, therefore, that the payment of dividends will be resumed before very long.

—From Mr. WM. ABBOTT's Circular for June, 16, Tokenhouse Yard, London, E.C.

MIDLAND DISTRICT MINERS' FATAL ACCIDENT RELIEF SOCIETY.—The first meeting of the board of management of this society was held at the registered office in the Wardwick, Derby, on Monday, when the Chairman explained that the members present would be aware that, as stated in the notice convening the meeting, this was the first assembly of the board of management to make all the requisite arrangements for inaugurating the commencement of the "Midland District Miners' Fatal Accident Relief Society," a society, the existence of which had been long needed in this very important mining district, under the charge of Mr. Thomas Evans, Her Majesty's Chief Inspector of Mines. The subscriptions were so small that the poorest can afford to pay them; none can, therefore, complain that their circumstances hinder them from joining the fund.

The formation of the society had now been in hand for some months, and considerable delay had arisen in the preparation and registration of the rules, but he was now pleased to be able to announce that the rules had been duly registered under the Friendly Societies Acts. Nothing now remained but to make all the preliminary arrangements for commencing the society and enrolling the members. He (the Chairman) was glad to see so large a number of representatives of most of the principal collieries present at this, the first meeting; and he was quite sure, from the interest evinced in all the four counties, that the society would be productive of incalculable good in relieving the distress caused not only by the large accidents, but by the numerous small ones—in ministering to the relief of the widows and children, and the payment of legacies to the relatives of unmarried members who may be killed by these casualties, which are of such frequent occurrence in and about coal and other mines, or quarries, and a sum to defray the funeral expenses of members accidentally killed in and about the pits.

The meeting confirmed the appointment by the committee of the five trustees of the society, Messrs. John Edward Ellis, John Peter Jackson, Humphrey Trafford Nadin, George Skey, John Puxley White, Francis Beresford Wright, and of the twenty-five honorary members and twenty-four ordinary members, who had taken great interest in the formation of the society, and who had consequently been nominated as forming the board of management for the first year. Mr. Henry Starkey, of Limby Colliery, near Nottingham, was added to the list of ordinary members. Mr. Alfred Barnes, M.P., was appointed Chairman, and Mr. James Darlington, J.P., Vice-Chairman of the board of management. Messrs. T. W.

Evans, M.P., and J. G. Crompton, accepted the joint treasurership, and the appointment of Messrs. Crompton and Evans, Union Bank (Limited), as the bankers, was confirmed, as was also the appointment of Mr. W. Saunders as general secretary. It was resolved—"That application be made by the board of management to the present three trustees of the Hartley Fund, to hand over to the six trustees of this society the balance of the fund now in their hands, three of the six trustees being the present trustees of the Hartley Fund, and that a circular letter be addressed to all the lessors of the mines and quarries in the Midland district, asking for the kind co-operation of all the mineral landlords as honorary members, as their assistance would materially promote the welfare of those who are engaged in developing the resources of this district."

NITRO-GLYCERINE EXPLOSIVES.

The result of the official enquiry into the circumstances attending the explosions at the offices of the Local Government Board in Whitehall, and at the Times office on March 15, must be particularly gratifying to all manufacturers of nitro-glycerine explosives ordinarily sold in the British market for industrial purposes, since the report of Colonel Majendie, C.B., the Chief Inspector of Explosives, which has just been presented to Parliament, furnishes conclusive evidence that the infernal machines used were not charged with any of the dynamites or nitro compounds which are commonly sold in this country for mining, quarrying, and similar legitimate purposes. Fortunately for the safety of the community the investigations which have from time to time been made under the Explosives Act, 1875, have enabled the Government officials to obtain so accurate a knowledge of the characteristic behaviour of each particular explosive met with in commerce, that it is now not extremely difficult to determine from the effect produced what explosive has been used. Col. Majendie reports that both the explosions now under consideration were evidently the result of deliberate design on the part of evil-disposed persons, and that one of them, at any rate—that at the Times office—resembled very remarkably in its leading features the explosion at Possil-road Canal Bridge, at Glasgow, the report upon which was fully referred to in the *Mining Journal* a few weeks since. The damage done by the explosions on March 15 have been so fully reported that they may be assumed to be known, but Col. Majendie now gives figures which add much to the interest.

From detailed information collected from house to house it appears that the force of the explosion was directed mainly in a southerly and south-easterly direction, and expended itself within a very limited area, of which the extreme points were at the corner of Parliament-street and Bridge-street on the south-east, and of Delahay-street and Great George-street on the south-west, both distant about 180 yards from the point of explosion. The instances of anything which could be fairly designated structural damage outside the Government offices themselves appear to have been extremely rare. In this connection Col. Majendie recalls the interesting results officially given by him as to the area affected by the much more formidable explosion on the Regent's Canal in October, 1874; these results showed that the area of scorching effects, or "range of flash," was 50 yards, or about 1-32 of a mile; the area of serious structural damage was 200 yards, or about ½ mile; the area of structural damage was 400 yards, or nearly ¼ mile; the area of damage to window frames, sashes, ceilings, and doors was 600 yards, or ½ mile; the area of broken windows was ¾ mile to 1 mile, though in a few rare instances panes of glass were broken up to 2½, and even 3 miles; and the area within which sound was heard was 15 miles. In the case of the Westminster explosion the structural damage appears to have been very local. Broadly, says Colonel Majendie, the results of the explosion may be said to have consisted in serious structural injury to one room (No. 8), in the blowing away of the balustrade in front of the window of No. 8, in structural injury to the room (No. 35) immediately over No. 8, in some cracking and disfigurement of stonework on the outside of the south front of the building in the immediate vicinity of the explosion, in the projection of large quantities of debris up to the police premises on the south, with some slight injury to the wall and roof on which it impinged, in the destruction of a number of window frames, sashes, and doors in the Local Government Offices, in some damage to frames and sashes in houses in the streets immediately adjoining, and in the extensive breakage of plate and ordinary glass in the south wing of the Government Offices, and over a moderate area. But the structural effects of any importance were of an essentially local character, having, in fact, been limited to the room and balustrade where the explosion occurred, to some slight cracking of the masonry above, and on either side, and to the injury to the floor of the room immediately above. If the intention was to "blow up" the Government offices the result fell almost ludicrously short of the conception, and must be set down as a complete and bungling failure.

After minute investigation Colonel Majendie arrives at the conclusion that it may be stated with absolute confidence that the charge had been deposited on the sill, a few inches (probably about 5 or 6) from the left window jamb, and about the same distance from the front of the sill. The thick masonry forming the window thus became for the moment a sort of rude gun, firing back and front. To the front it discharged the missile matter which was furnished by the balustrade and some portions of the fractured jamb, producing also the violent atmospheric disturbance which broke windows and accomplished the other damage already described. To the rear it projected the shattered window and such portions of the sill and brickwork as were behind the charge, while a great wave of gas, producing an exceedingly powerful atmospheric commotion and compression, was driven inwards and upwards into the room, breaking the furniture and impinging upon the back wall, the two doors, and the strong ceiling, and being deflected downwards from the latter on to the floor, of which a large portion was destroyed as described. The atmospheric wave, as it escaped through the open doorways, travelled right and left, down the corridor and into the neighbouring rooms, where its force ultimately became spent. After equally careful consideration he remarks with regard to the explosion that it is, he thinks, justifiable to pronounce confidently that it was certainly effected by means of an explosive of the nitro-compound class.

As regards the amount of explosive used Colonel Majendie is of opinion that with ordinary dynamite, or an explosive of equivalent strength, the results observed might have been obtained with material containing not more than 20 lbs. of nitro-glycerine, and might perhaps, have been effected with a preparation containing no more than about 15 lbs. of nitro-glycerine. If, he continues, we take it at the former amount, we should have a total of about 27 lbs. of dynamite of the full strength (*i.e.*, containing 75 per cent. of nitro-glycerine), or about 28½ lbs. of lignin-dynamite of the strength of that which was found in the two infernal machines lately seized at Liverpool (about 70 per cent. of nitro-glycerine), and it is worthy of special notice that the charge of each of those machines was almost exactly 28 lbs. It is, therefore, not unreasonable to suggest that the explosion was effected with an identical machine identically charged. Such a machine measures only 8 in. square by 12 in. deep (or four-ninths of one cubic foot), and is, therefore, not a bulky package to carry. The explosion at the Times office is investigated and reported upon with equal care: he considers that the impression that the box was placed on a ledge and thrown down by the explosion was unfounded, and he has no doubt whatever that the box was placed and fired in the position in which it was found—on the ground against the grating of the basement window. The fact that not only the window-sill of the publishing room, but the sills of several other windows, many of them a long way out of the reach of a man standing on the ground were covered with the lignin-dynamite, is a proof that the explosion had had the effect of throwing a quantity of the light lignin-dynamite high into the air, where it became scattered on the window sills. As the tin box used at the Times office, even if full, would hardly have held more than about 10 or 12 lbs. of the material, the explosive power contained therein would not represent more than about 5 or 6 lbs. of ordinary dynamite, and such a charge exploded outside a well-constructed building could not, as we know from actual experiments, have produced results of serious structural importance, though in the exceedingly confined limits of Play-

house-yard the results would have been more considerable than in an open space.

But the significance of this attempt, as Col. Majendie remarks, is not to be measured so much by the character of any possible immediate results which might have been contemplated, or which it is reasonable to believe would have ensued had the attempt been successful, as by the remarkable identity existing between this attempt and that which was made on the Possil Bridge, Glasgow, on Jan. 15, an identity which is so striking as to leave no room for doubt that both outrages were the work, if not of the same hand, at least of the same organisation. In the first place, there is between the two the similarity of the boxes employed. Both were japanned tin bonnet-boxes, that used at Glasgow being somewhat the larger; both boxes had slits or openings roughly made in the lids, through which it is evident the firing arrangement was intended to be employed. Secondly, in both cases lignin-dynamite was employed, that used at Glasgow being the weaker preparation (containing about 20 per cent. nitro-glycerine, as against about 30 per cent. in the Times case). Having regard to the larger quantity employed at Glasgow, the total explosive force available was probably about equal in the two cases. Thirdly, the Glasgow box was undoubtedly fired by means of an arrangement whereby sulphuric acid was brought into contact with a chlorate of potash mixture; and although the unfortunate loss of the piece of brass tube which was found in the Times case forbids him concluding as positively that in this case also a similar igniting agency was employed, the fact that such a piece of brass was found, while no portion of fuse or any other apparatus for firing the charge was discovered, establishes a strong presumption in favour of an identity in the firing arrangement. Fourthly, in both instances the body of the explosive material became ignited only and burnt without explosion. And, lastly, in both cases the results, so far as any material effects go, were abortive.

In conclusion, Col. Majendie observes that when we add to these points of resemblance the further facts that lignin-dynamite is an explosive which has never been licensed for manufacture in or importation into this country; that it is not in lawful use, and consequently cannot be obtained from any of the licensed makers of or dealers in nitro-compounds in the United Kingdom, and must, therefore, have been either illegally made, or imported for a special purpose; that no nitro-glycerine preparation intended for legitimate industrial use exists, as in the Times and Glasgow cases, in bulk, but only in the form of cartridges; that the nitro-glycerine in the dynamite in both these cases was exceedingly ill-purified, and, therefore, can hardly have been obtained from any established lawful factory or extracted from the dynamite of commerce, but must almost certainly have been surreptitiously manufactured here or elsewhere; and, lastly, that the only other instances of the presence of lignin-dynamite in this country with which we are acquainted were in the cases of the 10 infernal machines brought secretly in 1881 from America in the Malta and Bavarian, and seized at Liverpool, and of the two infernal machines from Ireland more recently seized in the same city. These facts, coupled with later disclosures, leave no doubt as to these outrages, or attempted outrages, being links in one great chain of conspiracy, the object of which is evidently to create grave public alarm, anxiety, and inconvenience, by injuring public offices and other prominent buildings and works, while the direction whence the impulse to these outrages is derived is equally unmistakable.

THE EXPLORATION OF MINES AFTER EXPLOSIONS.

The concluding meeting for the present session of the Manchester Geological Society, held on Tuesday, was specially devoted to the consideration of the best methods to be adopted for the exploration of mines after explosions. The President (Mr. JOHN AITKEN) occupied the chair, and there was a numerous attendance of mining engineers connected with collieries in the district. One feature of the meeting was the exhibition of the Fleuss breathing apparatus and lamp, and at a previous meeting a paper was read by Mr. Joseph Dickinson describing the apparatus. A complete abstract of the paper has already been given in the *Mining Journal*. The experiments and discussion which followed brought out, however, some additional facts and information respecting the apparatus which will be of interest. As an independent test of the breathing apparatus, it was worn for a few minutes by one of the members of the Society, who after the experiment intimated that he had been able to breathe quite easily, and that he could hear perfectly, the only difficulty being in speaking.

Mr. BROWN, in answer to questions, stated that the weight of the breathing apparatus in working order was 28 lbs. It was charged to enable the wearer to breathe in the midst of noxious gases for the space of four hours, and that there was a margin of 10 minutes beyond that for a person who knew how to use it properly. The weight of the lamp was 13 lbs., and this would burn for four hours under water or in the midst of gases.

Mr. BURROWS asked if the lamp would be liable to go out if it was allowed to fall out of the hand of the person conveying it?—Mr. BROWN said he could not reply to that question, as the lamp had not been tested in the manner suggested. The lamp could, however, be held in nearly a horizontal position with perfect safety.

The CHAIRMAN asked what would be the cost of the breathing apparatus and of the lamp separately?—Mr. BROWN replied that they were selling the breathing apparatus with a bottle of oxygen for 25/-, and the cost of the lamp was 13/- 10s. A bottle of oxygen costs about 4/-, but a bottle could be refilled for 15s. With care in using, one bottle would contain four to five charges for the apparatus.

The CHAIRMAN said that so far as the experiments had gone they appeared to be perfectly satisfactory. The meeting was now open for the discussion of the paper read by Mr. Dickinson at a previous meeting, and on the use of breathing apparatus for exploring mines after explosions.

Mr. JOSEPH DICKINSON, in opening the discussion, said that in his paper he had referred to the different respirators that had been before the public since that of Dr. Hutchinson in 1849, and explained that the great difference between the Fleuss invention and other similar appliances which occurred to him was that the oxygen gas was used as a means of inspiring, and the caustic soda was used as a means of absorbing, the carbonic acid resulting from the breath. He would like to ask whether any other caustic would answer as well?

Mr. BROWN said they had tried the indiarubber sponge, and mixed that with caustic paste, but this was a dirty process. Of all the caustic chemicals they had tried they had found the sticks of caustic soda the cleanest and the best.

Mr. DICKINSON observed that according to the formula of the chemical bodies a volume of oxygen was equal to three times the same volume of air. According to this the same bulk of oxygen would last three times as long as the same bulk of air; he did not know whether Mr. Brown from his experience of the apparatus was able to furnish them with any further information on this point.

Mr. BROWN said he was not in a position to give any information as to the relative proportions beyond what Mr. Dickinson had stated.

Mr. DICKINSON said the Denayrouze apparatus was entirely dependent upon compressed air, and the air, after being respired, was passed into the atmosphere. There were, however, different kinds—one where compressed air was used, and another where a connecting pipe supplying air was used. He should like to know how many hours a person had actually used the Fleuss apparatus—whether a person had breathed through one of them for four continuous hours.

Mr. BROWN said the apparatus had not been worn for four continuous hours, but at Seaham they were used for fully two hours. The only effect was, that the wearer got somewhat warm.

Mr. DICKINSON said he saw one colliery owner present in whose colliery, some half-dozen years back, a fire took place, and 18 persons were suffocated. Although the men were reached from a back air-way, and might have been saved, they refused to believe that the return to the shaft was not cut off. There was a means for these men to escape, but they would not go; but in the event of escape being only through irrespirable gas, there would be no means of retreat.

Mr. BROWN observed that the searchers would take a spare appa-

ratus with them; one man should never go into deadly gas by himself, two men should go and take a spare apparatus with them.

Mr. DICKINSON suggested whether the rescuers might not carry some portable apparatus with them of a lighter description, which would enable the people to be safely brought out. The quality of the air they had to breathe was much more important than the quantity, and even a bladder, if used carefully, might bring a person through long space of gas.

Mr. BROWN, in answer to a further question, said that if the apparatus were used for a quarter of an hour and then put away the caustic soda would harden, and have to be renewed.

Mr. TONGUE, referring to the suggestion from the Secretary of State contained in Mr. Stephenson's paper, that stations furnished with the Fleuss apparatus should be formed in different districts, asked whether the Government would contribute anything towards the expenses of forming those stations?

Mr. HALL (Inspector of Mines) said he should have liked Mr. Dickinson to have expressed a definite opinion as to which he considered the best of the different appliances which had been referred to.

At the conclusion of the discussion the usual vote of thanks was passed, and the meeting separated.

SOUTH STAFFORDSHIRE AND EAST WORCESTERSHIRE INSTITUTE OF MINING ENGINEERS.

A general meeting of the members of the above Institute was held at the Mining Museum, Dudley, on Monday. Mr. H. JOHNSON, jun., President, was in the chair, and many of the prominent members were present, including Mr. W. B. Scott, the Chief Mine Inspector of the district. After the formal business, the secretary, M. ALEXANDER SMITH, M.Inst.C.E., read a letter from three of the Professors of Mason's Science College, Birmingham, suggesting a Coal Mining Department should be opened at the College, and special courses of lectures be given to students and others interested in mining. This was exceedingly well received, and the following resolution was unanimously passed:—"That we heartily approve the general scheme of mining lectures as suggested by the Professors of Mason College in their letter to the secretary, dated June, 1883, and pledge ourselves, both collectively and individually, to further it in every way in our power."

The Council were appointed a committee to confer with the Professors as to the details of the scheme.

The SECRETARY read the Home Office circular referring to the Fleuss apparatus, and Mr. Brown, of Fleuss, Duff, and Co., exhibited the apparatus in working order whilst the Secretary read the paper describing it, and in which it was stated that the many difficulties to be met with in mining emergencies and submarine operations are well known to those who have to contend with them, and inventors of various appliances by which artificial respiration is maintained, have made many improvements from time to time, and attempts have been made to enable the explorer or diver to carry on operations without the necessity of having the air pumped down through flexible tubes; but nothing practical had been done in this way until Mr. Fleuss invented his apparatus for filtering the breath and admixing oxygen, thereby giving a regular supply of pure air. Many severe tests were successfully applied to the apparatus, but more means of extraordinary practical work has been accomplished by means of the apparatus, and thus it has been put outside the category of theoretical inventions, and is to-day recognised as a most practical and valuable invention for submarine work, and for exploring the most intricate turnings of a mine in which there may be most deadly gases. The importance in mining emergencies of compact, portable, and self-contained apparatus, by means of which accumulations of noxious gases, incidental to deranged conditions of ventilation or fire in coal mines, may with safety and facility be penetrated, needs only to be mentioned to bring to mind at once occasions for application; the advantages of such means are obvious, particularly for purposes of observation, rescue of life and property, and opportunity to do, remove, place, or construct whatever the case may require.

The chief recommendation of the Fleuss' patent noxious gas apparatus for breathing in irrespirable gases is, that it is self-contained, and wholly independent of the surrounding atmosphere, and will supply breathable air for four hours at a time, thus enabling the wearer to breathe with safety in the most deadly gases. The principle of the apparatus is, that the wearer breathes his own breath over and over again, the carbonic acid being taken from it at each respiration and the requisite amount of oxygen restored, the revivified breath is fit to be again inhaled in the form of pure air.

The essence of these inventions is that all means of communication with the surface or pure atmosphere is now dispensed with, and the wearer of Fleuss' dress is enabled to carry with him, not merely compressed air, but more compactly, and, therefore, lasting for a longer period, the ingredients for producing and re-producing breathable air. The lamp also is isolated and self-contained, giving light that is inaccessible to the gases or water by which it may be surrounded without imparting or sustaining injury, and without any connection with tubing or electric wires. In conclusion, it was claimed that in addition to its value in collieries there are also other fields where the noxious gas apparatus might be beneficially employed—the Salvage Corps—it enabling the firemen to traverse the densest smoke and save property and life. On board ship, where fire may have broken out in the hold, and where often a bucket of water would quench the incipient flame, if the smoke would allow its seat to be discovered, the breather would be of immense service; also, in saving the life of any unfortunate who may have been overcome by carbon dioxide in sewers, gasometers, ships' holds, tunnels, &c. The apparatus, which can remain charged and ready for instant use for any period without deterioration, will fulfil all these and many other purposes.

A resolution was passed thanking Mr. Brown, and pledging the Institute to further the introduction of the apparatus as far as possible.

PRACTICAL FIELD GEOLOGY.

That a grain of practice is worth a pound of theory has been so long acknowledged that it would be superfluous to urge its correctness, so that the constant efforts of the Geologists' Association to encourage practical geological excursions cannot but be regarded as worthy of commendation. The amount of really sound instruction to be obtained from the current month's excursions is enormous, whilst a more agreeable process of study can scarcely be imagined.

On Saturday last the neighbourhood of Croydon was chosen for exploration, the direction of the party being undertaken by Prof. John Morris, M.A., F.G.S., and Mr. H. M. Klaasen, F.G.S. Early in the afternoon the party proceeded by railway to Woodside Station, from whence they started on a pleasant walk to examine the cuttings through Park Hill for the new railway, which cuttings expose the whole series of the Woolwich and Reading beds. The most fossiliferous bed is the brown clayey sand, the lowest division of the Woolwich and Reading bottom bed, which contains an extraordinary quantity of sharks' teeth and ostrea bellovacina, some crocodilian teeth, teeth of an edaphodont fish, fish vertebrae, cardia, nuculae, pholadomya, fragments of leaves, and silicified stems of plants. A perna, the first to be recorded as occurring in the Woolwich and Reading beds in England, was found here during the excursion of the Association in July, 1882. The blue clay bed contains ostrea, cyrenae, melania, and paludina, and has three basin-shaped lignite beds. Important remains of coryphodon were found in the dark blue clay of the north cutting. The excursion was altogether a highly interesting one.

An equally interesting excursion is arranged for Saturday next under the direction of Mr. T. V. Holmes, F.G.S.; this is a visit to the Deneholes, near Gray's Thurrock, in conjunction with the Essex Field Club. Hangman's Wood is about 1½ miles from the station, and the Deneholes there are about 80 ft. in depth, and their shafts are sunk through gravel, Thanet sand, and chalk. It may be mentioned that the Council of the Essex Field Club has resolved to attempt a thorough and systematic investigation of the Deneholes in Hangman's Wood, Little Thurrock, and those existing in other parts of the county of Essex, in the hope of determining, as far as possible, the age and intention of these interesting excavations. The results of

preliminary examinations made have been furnished to the Essex Field Club, and it is hoped that the proposed investigations of the Essex examples will throw light upon those existing in Kent and elsewhere, many of which have been figured and described by Mr. Flaxman Spurrell, in the *Archaeological Journal*. The works will be somewhat costly, as probably not less than 200*l.* will be required, and an appeal is made to the public for aid in conducting the enquiry. It is anticipated that there will be displayed a wide-spread interest in these curious relics, the right understanding of which may have considerable bearing on our notions of the early history of mankind.

But probably the most interesting excursion of the month will be that on June 30 to Balcombe and Worth, Sussex, under the direction of Mr. W. Topley, F.G.S., an officer of the Geological Survey of England. Upon reaching Three Bridges by train the party will proceed to Worth Church (1 mile S.E.), through Worth and Tilgate Forests, over Balcombe Down to Balcombe Station (3½ miles S.). Total distance to walk will be about 8 miles. The party will return from Balcombe Station. Only the upper parts of the Hastings beds are seen. The top beds of the Lower Tanbridge Wells sand are rocky, and are well seen around Balcombe. Good sections of the Grinstead clay are seen in the railway cuttings N. and S. of Balcombe tunnel. The Upper Tanbridge Wells sand is seen in cuttings near Worth; a subordinate bed of mottled clay is seen in a brick-yard in Worth Forest. Balcombe Down (470 ft.) is on the central anticlinal line of the Weald. It is also on the central line of watershed, the streams to the north flowing into the Mole, and thence into the Thames; the streams to the south flowing into the Ouse and thence into the English Channel. One of the finest views in Sussex is obtained from the summit, extending over the entire Wealden area. Worth Forest is part of the ancient Forest of Anderida, which once thickly covered the entire Wealden district. Large ironworks were at work here in the last century, at which cannon were cast in great numbers; the slag heaps of these furnaces still remain, and will be visited. Worth Church is especially interesting, as presenting the only perfect example of a Saxon ground plan. The characteristics of Saxon work are well seen here—long and short work, and external upright bands or pilasters of masonry, supporting another band which runs as a string course around the church.

FRENCH VIEWS ON ENGLISH MINING.

A highly interesting review of Messrs. Pernolet and Aguililon's report on English Fiery Mines was given at the recent meeting of the Mining Institute of Scotland, by Mr. R. T. Moore, C.E., B.Sc. It will be recollect that these gentlemen visited this country as Commissioners from the French Government to examine the state of mining in England, and especially English mining legislation. They examined a number of collieries in England and Wales, and were in Scotland. They were very industrious and very observant. The result is a large volume, copiously illustrated, in which they have given their opinions very freely upon the various points which came under their notice. They remark that all English mining legislation is summed up in the law of 1872. This may be divided into two parts—that relating to the paying of workmen, hours of work, employment of women and children, &c.; and that relating to the security of the workmen. It is to this second head that the committee specially draw attention. In England, laws are generally made after an expression of public opinion, and there are always many discussions and meetings whenever an accident involving a large loss of life takes place. Public attention was first called to explosions of fire-damp by the Felling explosion in 1812, where 92 persons were killed. This led to the foundation of an association at Sunderland to investigate the causes of explosions; and Sir Humphry Davy, while in the North on a visit to this association, in 1815, invented the safety-lamp. Notwithstanding this, there was still an increase in the number of accidents.

In 1840 Lord Shaftesbury, who took a great interest in working men, got Government to appoint a Royal Commission, which showed the condition of the miners to be very bad. After considerable discussion a law was passed preventing the employment of women in mines, and children under ten for more than eight hours a-day, and preventing the payment of wages in public-houses. An Inspector was appointed to see the regulations carried out, but was not allowed to go down the pits. The law of 1842 was looked upon with mistrust by the coalmaster and indifference by the miner. A Select Committee was appointed in the beginning of 1853, and they, after finding by experiment that the Davy lamp was unsafe, decided that it was better to improve the ventilation than trust to safety-lamps. They recommended the use of the steam-jet and the ventilation of goaves by means of bore-holes. They said that there were too few Inspectors, and recommended the appointment of 12, with two assistants each, and a special staff composed of scientific and practical men, who were to give instructions to them. The recommendations of the Select Committee raised a lively discussion, and another committee was appointed. This committee heard deputations from the workmen and from the Coal Trade Association of Northumberland, who, under the presidency of Nicholas Wood, drew up a set of regulations which formed the basis of the law of 1855.

The chief provisions of this law were the establishment of general and special rules, and of the principle of arbitration between Inspectors and coalmasters. There were 12 Inspectors appointed for Britain. This law was only for five years, and at the end of that time (in 1860) another Act was passed, which was substantially the same as that of 1855, the only difference being that the powers of Inspectors were extended. In 1862 the Hartley accident occurred, and an Act was passed, without any serious opposition, making two shafts compulsory upon all mines. The workmen still complaining, a fresh Select Committee was appointed, and they, in 1867, gave in a report recommending that powder should not be employed in mines where safety-lamps were used, that not more than 100 persons should be employed in a mine or section with a separate intake and return, and that there should be a barometer and thermometer at each mine. A Bill embodying these recommendations was introduced in 1867, but did not pass, and the Bill of 1871 shared the same fate. The discussion before Parliament gave rise to several important modifications, and the project thus modified gave rise to the Act of 1872, where, for the first time, Certified Managers were required. Each of the Inspectors got an Assistant. Some difficulties arose in the application of the Act, notably as to whether the certificate of service should be given to the mining engineer or to the viewer. It was thought strange that certificates should be given to men who had charge of a small place, and should be refused to those who were underviewers at a large one; and the Government finally gave them to underviewers who could show that they had had the practical charge of a mine for the time specified by law.

[To be continued in next week's Journal.]

RUSSIAN GOLD.—Brussels advices state the value of the gold raised from the soil in Russia in 1881 was 5,044,602*l.*

LITERARY RECORD.—The current number of Trübner's American, European, and Oriental Literary Record, contains the usual large amount of literary intelligence and brief notices of high-class books; obituary notices of Cooley, Dozij, and Prof. Greene, of Cornell University; and has by way of appendix the prospectus of Prof. F. Techmer's Internationale Zeitschrift für Allgemeine Sprachwissenschaft, which will probably be highly appreciated by philologists in general.

ASBESTOS GOODS.—A very complete illustrated catalogue of asbestos goods has been issued by Mr. John Bell, the well-known asbestos manufacturer of Southwark-street. It appears that, whether for flooring felt, cordage, engine-packing, block-packing for marine or pumping-engines, or as lumps and fibres for gas fires, asbestos has been proved by experience to be economic and reliable. The catalogue is a really interesting one.

MURRAY'S LONDON AND SUBURBAN TIME TABLE DIARIES.—The compactness and reliability of these very cheap tables have been before referred to in the *Mining Journal*. The current issues—those for June—cannot be more highly commended than by stating that they are in every respect equal to their predecessors.

WATSON BROTHERS' MINING CIRCULAR

WATSON BROTHERS.

M NEOWNERS STOCK AND SHARE DEALERS &c
1, ST MICHAEL'S ALLEY, CORNHILL, LONDON.

In the year 1843, when mining was almost unknown to the general public attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, published annually in the *Mining Journal* for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always selected this plan on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services and advice to all connected with mines and mining.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts; but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs. WATSON BROTHERS to make their Circular now published in the *Mining Journal* more extensively known, and to state—

That they issue daily to clients and others who apply for it a Price List (assembled to most of the London and country papers), giving the closing prices of mining shares up to Four o'clock.

They also buy and sell shares for immediate cash, for the usual fortnightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charge for commission. They deal also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in on the Stock Exchange.

Having agents in all the mining districts, they are constantly getting miners inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2s.

Messrs. WATSON BROTHERS take this opportunity of stating that on July 1 they took into partnership Mr. H. J. DEAN, who has been for a number of years associated with the firm, and Mr. W. H. H. WATSON, who has had some years experience of practical mining and engineering in Cornwall, and is the son of the senior partner. The firm will still be called that of "Watson Brothers."

The number of weekly communications received from almost every part of the world in regard to remarks in this Circular indicate so plainly how much they are read (and, we trust, appreciated) that they will be continued by the same writer.

Indeed, while new blood is introduced to attend to the more laborious and mechanical details of the business, the old will have more time to devote to their different departments.

It will be remembered that at the general meeting of Parys shareholders a few weeks ago some very strong remarks were made in regard to the action of the lords in suing the company for breaches of covenants of the lease (the first case of the kind we can remember during an experience of over 40 years), and that it was something more than insinuated that Mr. Evans, the manager of Mona, was at the bottom of it. We confess, from circumstances related to us, that we held the same opinion, and are now glad to be able to state, on the assurance of Mr. Evans himself, that we were entirely mistaken, and have great pleasure in making this acknowledgement of our error. We hope ere long we may have to refer with as much satisfaction to the action of the lords. We hold, and have held from the commencement a very large interest in Parys, and after upwards of 40,000£. have been expended upon the mines without any favourable result to the shareholders, owing entirely to the price of copper, we were all naturally very sore at the idea of the lords attempting, as we thought, to get the sets from us to hand over to the Mona Company. That an amalgamation of the two mines on fair and equitable terms to shareholders in both, and with ample capital to work them, would be a splendid thing we have always maintained, and are glad to say that things seem progressing towards that result in a more favourable and friendly manner. We have before stated our reasons for this amalgamation. The great open-cast, from which upwards of 5,000,000£. sterling in profit was made, belongs two-thirds to Parys and one-third to Mona. Parys has not only a very large sett besides with many productive lodes in it, but has millions of tons of halvans at surface (containing copper, and according to assays a small proportion of gold), and these halvans one day or other may be utilised to good account. Again, the company have large precipitate pits of their own, and joint pits with Mona also. On the Carrig-y-dol lode there is a large quantity of copper ore in reserve; at one time this was estimated as 40,000t., but it is of too low a produce to raise and sell at the present price of ore; but it might pay to raise and smelt into copper, and Mona Consols has large smelting works on their mine. In fact, there are many things that Parys has which would materially benefit Mona, and many that Mona has that would materially improve Parys, and the mines together, including Morfa Du, would make a grand affair to offer the public, Parys, Mona, and Morfa Du shareholders, of course, having their full interest *pro rata* in fully paid-up shares. At the time Parys lease was granted Morfa Du was not in existence. A discovery of bluestone was made in a distinct part of the sett, which was sold to the Morfa Du Company for 5000£., all of which was expended on the Parys Mine. Morfa Du has made good returns, and at one time was expected to be a dividend mine, but the low price of spelter and lead (the chief ingredients of blue stone) upset the calculations of profit. The mine, however, is a fine speculation, for under the mass of blue stone may one day be found a large deposit of copper.

The above remarks will, we think, sufficiently answer the many communications we have lately received on the subject of Parys and Morfa Du.

Trevaunance adjoins West Kitty, is in 8000 shares, 3s. paid, Cost-book, and good prospects.

East Blue Hills, in same district and same run, is in 12,000 shares 5s. paid, Cost-book, and is working to a profit.

North Blue Hills is in 12,000 shares, 2s. 6d. paid. A small engine will go to work in a few days, and the agents expect to find a rich copper lode in the shaft.

D'Eresby Mountain continues to improve.

At Langford the lode in the 60 east is 6 ft. wide, producing rich stones of copper ore.

We hope to have something good to report respecting the New Cadron next week.

The engine will go to work at North Blue Hills next week, and we hope to see the lode in shaft before the meeting.

At West Crebor the lode in the engine-shaft is 5 ft. wide, worth 10f. per fathom.

NATIONAL PROVINCIAL BANK OF ENGLAND.—At the special meeting, on Monday (Mr. R. Blaney Wade in the chair), the resolution passed at the half-yearly meeting, reported in the *Mining Journal* of May 12—"that this meeting of the shareholders of the National Provincial Bank (Limited), held on the 50th year of the bank's existence, desires to record its appreciation of the great services rendered by the board of directors—services which this meeting feels have conduced materially to the bank's sound and prosperous condition. As some recognition of these facts, this meeting begs the directors' acceptance of 5000£., and now votes that sum for the purpose"—was duly confirmed.—In moving the confirmation Mr. Belk mentioned that in 1873, when the present remuneration of the directors was fixed, the deposits amounted to 22 millions, and the advances to 10 millions. In 1882 the deposits amounted to 32 millions, and the advances to 19 millions; and although the paid-up capital of the bank had been more than doubled, there was no diminution whatever in the dividends.—The Chairman, in acknowledging the vote, assured shareholders that there would be a continuity of the policy and judgment which had characterised the business of the bank in past years.

DIED.—On June 6, at "Ashfield," Fairfield, Liverpool, the residence of his son-in-law, GEORGE PEACOCK, of Starcross, Devon. Aged 78 years.

IN LIQUIDATION.

THE CROESOR NEW SLATE COMPANY (LIMITED).

MESSRS. WM. DEW AND SON WILL SELL, BY AUCTION, at the Sportsman Hotel, Portmadoc, Carnarvonshire, on Friday, the 29th of June, 1883, at Two o'clock P.M., all that very

VALUABLE LEASEHOLD SLATE AND SLAB QUARRY

KNOWN AS THE

CROESOR QUARRY.

Situate at Llanlothen, in the County of Merioneth, together with the Manager's House, Quarrymen's Cottages, and the Mills, Barracks, and other Buildings belonging thereto for the residue of a term of 40 years from the 1st of January, 1876.

The sale will include all PLANT and MACHINERY, including inclines, rails, TWO STEAM ENGINES, &c., &c.

The lease comprises the slate rock under about 243 acres of land, and it was granted (in consideration of a large premium paid by the present company) on exceptionally favourable terms. For the first 30 years of the lease there is no royalty payable, and the ground rent is only £1 1s. a year. For the last 10 years a royalty of 2s. 8d. per ton is reserved, and the lease contains a covenant for renewal for a further term of 20 years at 12th royalty.

The Quarry is situated upon the celebrated Festiniog old slate vein. It was worked for several years, and yielded about 200 tons a month of slate of excellent quality. There are now 12 new bargains nearly ready for operations, and a comparatively small amount expended in further developing the quarry will render it one of the most extensive and profitable in the district. The depression in the slate trade not having entirely passed away, skilled labour for the purpose of carrying on works of development may now be obtained at low wages.

There is ample tip room and abundant water power, and an easy access at cheap rates along the Croesor Tramway to Portmadoc, a distance of about eight miles, whence the produce can be sent by sea or by rail.

Mr. THOS. WILLIAMS, the company's agent, will show intending purchasers over the property.

Further particulars may be had on application to Mr. J. E. JONES, Bank-place, Portmadoc; Messrs. BRESEE, JONES, and CASSAR, Solicitors, Portmadoc; Messrs. JONES and JONES, Solicitors, Portmadoc; or the Auctioneers, Bangor.

MONMOUTHSHIRE.

TO BE LET, ON LEASE, about TWO HUNDRED AND FORTY ACRES of

VALUABLE MAIDEN MINERAL PROPERTY,

Part of the NANT-Y-GLO AND BLAINA ESTATE, adjoining Collieries of the Ebbw Vale Steel, Iron, and Coal Company (Limited), Messrs. John Lancaster and Co., and the South Wales Colliery Company (Limited).

The property is believed to contain all the Steam Coal Seams usually found in the Monmouthshire Coal Field.

For further particulars, apply to WM. ADAMS, Esq., C.E., Cardiff; or Messrs. COLBORNE and WARD, Solicitors, Newport, Mon.

IMPORTANT TO MINE OWNERS.

FOR SALE, owing to completion of contract, a complete PLANT OF ROCK-DRILLING MACHINERY, comprising—

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ON SALE.—FOUR LANCASHIRE BOILERS, 30 feet by 7 feet. Shells double riveted, and Bowline expansion rings in flues.

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THREE ditto, 30 feet by 7 feet 3 inches, with six Galloway tubes in each flue.

THREE ditto, 26 feet by 7 feet, with four Galloway tubes in each flue.

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(Signed) A. LICCIANI, President.

(Signed) VICTOR T. GRILLET, Treasurer.

COLONIAL BANK (Incorporated by Royal Charter, 1856.)

Subscribed Capital £2,000,000

Paid-up 600,000

Reserve Fund 106,000

The Court of Directors of the Colonial Bank hereby give notice, that in pursuance of the provisions of the Charter a HALF YEARLY GENERAL MEETING of proprietors will be HELD at the Bank House, 13, Bishopsgate-street Within, E.C., on THURSDAY, the 5th July, 1883, at Two o'clock precisely, to receive the report of the proceedings of the Corporation, and for the election of a director in the place of Charles Marryat, Esq., resigned; and of an auditor in the place of Charles Richard Gurney Hoare, Esq., resigned.

Charles Richard Gurney Hoare, Esq., offers himself for the vacant directorship, and Lewis Hill Bliss, Esq., offers himself for the vacant auditorship.

Proprietors are requested to take notice of the following provisions of the Charter, viz.:—

I.—Every proprietor intending to become a candidate, or to propose some other proprietor as a candidate, for the vacant office of director must within ten days of the date of the first insertion of this advertisement signify by some writing under his or her hand, to be left within the same ten days at this office, either his own intention to become a candidate or the name and abode of the candidate intended to be proposed by him or her.

II.—A list of candidates, with the names of the proprietors (if any) by whom they are proposed, will be exhibited in this office at least 14 days prior to the date of election.

III.—No proprietor will be entitled to vote at this meeting unless his or her name shall have been registered at least three calendar months prior to the date of election.

The Transfer Books of the Corporation will be closed on the 18th June, 1883, and re-opened on the 5th July, 1883.

By order of the Court of Directors,

JAMES CLARK, Secretary.

13, Bishopsgate-street Within, E.C., 2nd June, 1883.

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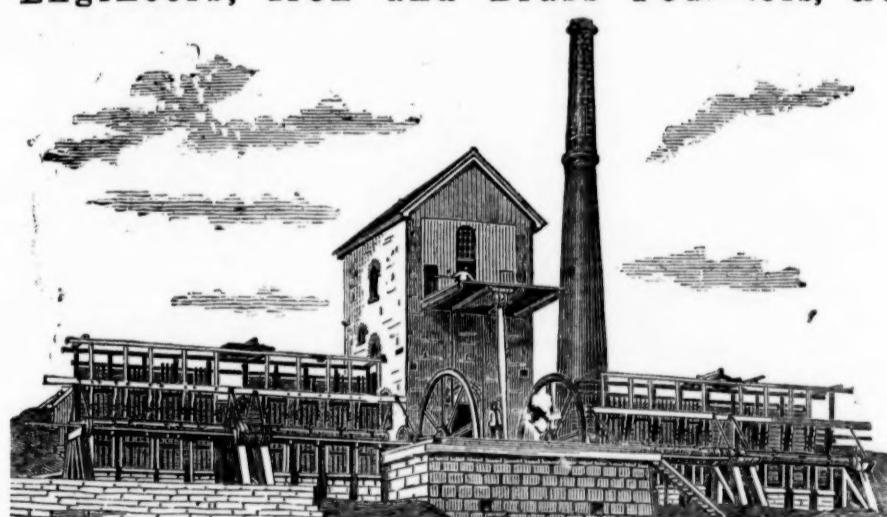
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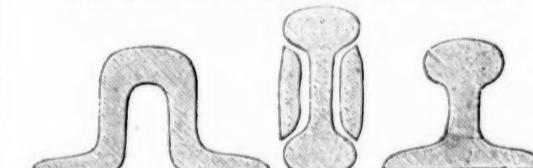
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